

SECTION 16.0 SPATIAL DISTRIBUTIONS AND ANALYSIS

INTRODUCTION

The study of artifact distributions and spatial arrangements within sites has been a basic cornerstone of archaeological research. Spatial studies have been used to elucidate specific questions of site activity and function, as well as wider parameters of settlement patterns and land use (e.g., Jochim 1976; Yellen 1977; Binford 1978, 1982; Gardner 1982; Custer 1989). The categorization and typing of sites is often based upon observed trends in artifact frequency, diversity, and/or spatial distribution. Such typing has grouped sites usually on the basis of assumed function. Examples of such functional types include procurement sites or reduction centers; hunting camps; and domestic sites (e.g., Gardner 1982). Spatial analysis is critical for assessing the arrangement of artifacts and features to ascertain if their encountered condition is indicative of cultural behaviors or natural post depositional influence (Stevenson 1991). The processes of site formation are numerous and varied, influenced by both cultural and natural agents. It is important, for example, to distinguish between single episode events, such as knapping clusters that result in high numbers of artifacts, and cyclical events such as repeatedly utilized fire hearths, which may have longer use lives without producing substantial increases in artifacts (Binford 1982). These distinctions are critical as they influence the notions of intensive versus extensive use of a site. Adding to the complexity, natural processes including sedimentation rates and post-depositional forces are important in the formation of an archaeological site, as they may influence the location, density, and condition of artifact deposits (Butzer 1982; Waters 1992). Growing awareness of the complexity of spatial relational data has allowed for more sophisticated interpretations of site structure and has allowed for the testing of previous theoretical models used to “type” sites.

Hickory Bluff was a complex site with artifact assemblages that were extensive in quantity and diverse in their spatial distributions. Variability of the component assemblages suggested the complexity of occupation. Chronological information gathered from radiocarbon dates, ceramic typology, and diagnostic projectile points illustrated that the site was repeatedly occupied throughout a substantial segment of prehistory. A mixture of chronological periods was represented in most areas of the site, yet there was little clear evidence of vertical stratification with which to easily isolate specific occupations. Cultural debris spanning as much as 4,000 years was contained within a sediment package that averaged only 30 cm thick. However, within the complexity of this and other data sets from the site, certain patterning provided information about more discrete site structure and occupation. The block excavations allowed for large sections of the site to be examined for evidence of horizontal separation of its components.

A variety of spatial distributions will be examined in this section to provide a more detailed view of the artifact subassemblages and their relationship across the site. Comparative distributions of features, diagnostic artifacts, and non-diagnostic artifacts will be employed with the aid of computer plotting and cluster recognition to interpret site structure and identify potential latent features. Refitting of thermally altered stones (TAS) will be used to help assess the delimited spatial boundaries of evident TAS features and the relationship between feature and non-feature contexts. Plots of the ceramic vessel lots will be overlaid on general ceramic distributions to help identify both site formation processes and possible activity clusters of

artifacts. Complementary overlay maps will be used to display the results of various spatial inquiries to evaluate the implications of multivariate evidence. Given the size of the Hickory Bluff assemblages, not every pattern and association could be run for evaluation, hence specific data sets and inquiries were selected.

Methodology

Construction of Grid

The Hickory Bluff site was situated on a bluff along the east bank of the St. Jones River, which formed the western site boundary. The northern, southern, and eastern site boundaries were arbitrarily defined by the limits of the construction right of way. The site was overlaid with an arbitrary grid system to control for artifact and feature proveniences. This grid was aligned with the wider State Route 1 (SR1) corridor right-of-way. The centerline marker of 399+00 was located along the arbitrary grid line of N367 E642. The previous field investigations conducted at Hickory Bluff were also relocated and incorporated onto the new arbitrary grid alignment during the current study.

The inclusive data gathered from Shovel Test Pit survey (i.e., Hunter Research and Parsons) indicated a variable density of artifacts across the site. Artifact counts generally decreased from west along the bluff edge to east within the former orchard area. Despite the disturbance of plowing in the eastern section of the site, this pattern of variable density was considered valid, as both plow zone and sub-plow zone counts were low in this portion of the site. These areas were then divided into zones of high, medium, and low artifact density and tested by block excavation to gather comparative distributional data and for site coverage.

Test units were 1 meter (m) squares and identified by their location on the grid, according to the northeast corner of the unit (e.g., N370 E643). In this way, horizontal provenience was controlled without the addition of arbitrary unit number designations. Blocks of contiguous excavation units were designated with arbitrary letters for identification and organizational purposes. Lettering started from the southwest portion of the site and continued northward. Test units not incorporated into larger excavation blocks were also organized by their site location (e.g., Northwest Quadrant or South Side Non-Block). These divisions provided a basic level of spatial organization across the site (Figure 16.1).

Vertical provenience of artifacts was controlled by arbitrary letter designations within each test unit to correspond with visible soil changes (i.e., Strata A, B, C, D and E). Anomalies in the soil, both cultural and natural, were designated with feature numbers, assigned sequentially upon identification (e.g., 1- 309). These arbitrary soil designations were later combined or remained and received a “Universal” stratum designation (Section 6.0). In this way, artifacts and features were identified both horizontally and vertically within the wider grid system to facilitate spatial queries.

Computer Plotting

Spatial analyses for Hickory Bluff were undertaken with the aid of computer plotting of the data for cluster recognition. The use of computer plotting allowed several maps of various

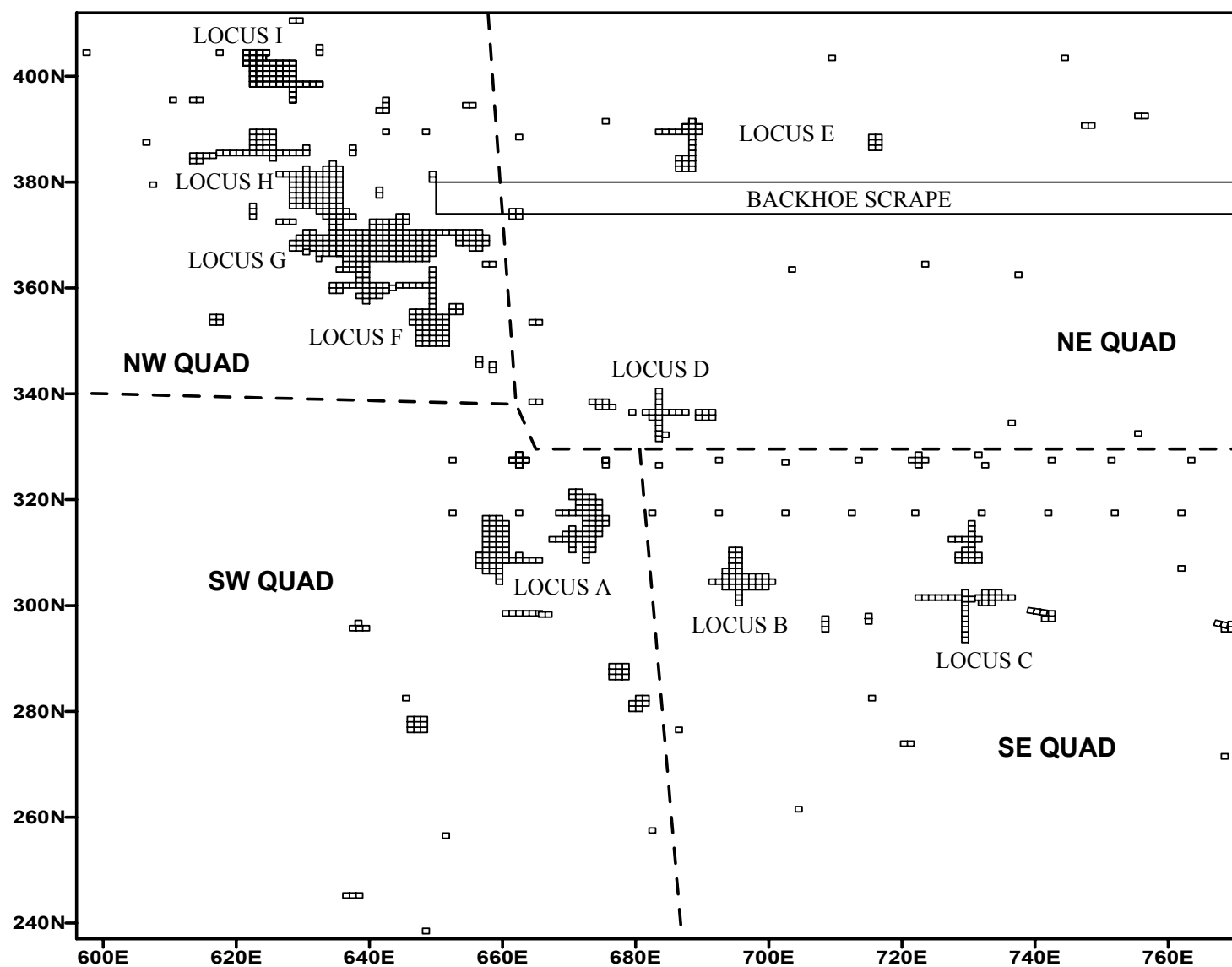


Figure 16.1 Site Excavations and Locus Locations

levels of detail to be quickly and accurately produced. Two software packages were used for the spatial analyses, each with different capabilities: Golden Software SURFER[®] and ArcView Geographic Information Systems (GIS).

SURFER[®] is a graphics program that displays grid-based contours or three-dimensional surface plots. The program interpolates the data that are input onto a regularly spaced grid, which are then displayed as contour lines or surface plots. The data are interpolated with the Kriging method, which is a flexible geostatistical grid method that works on a variety of data types. This method tries to illustrate the trends that are expressed in the dataset by connecting similar points with a smooth contour, as opposed to a bulls-eye contour. The generated grid interpolations are effective for displaying surface plots of artifact frequencies, and to identify clusters and anomalies in the data. The Kriging method may also be used effectively to display elevation data to create three-dimensional surface plots. In general, SURFER[®] is a good analytical tool for generalized contour information for comparing single variable frequencies (e.g., flake distributions).

ArcView GIS applications may also be used to generate surface plots, but its contours are not as smooth. On the other hand, GIS applications allow for much more sophisticated spatial inquiries to be undertaken, such as by specific feature types or concurrent multivariate artifact attributes. ArcView projects are linked directly to the comprehensive database so that any field in the database that has spatial implications can be displayed.

General Artifact Distributions

A site the size of Hickory Bluff necessitated a staged approach to the analysis. To begin the spatial analyses, several general plots were undertaken to observe the broad-level patterns with which to guide more detailed inquiries. Broad patterns were examined both across the whole site and within discrete, contiguous excavation blocks, to provide some resolution. Site-wide contours for test unit data become skewed as a result of the large areas of unexcavated space and resultant lack of data and are therefore not useful. General distributions included first, total prehistoric artifacts and then, the distribution of major artifact classes: debitage, TAS, and ceramics, each of the major excavation blocks.

The distribution of total prehistoric artifacts gathered from shovel test pits suggested a trend of differential artifact intensity across the site (Figure 16.2). The total number of artifacts decreased from the western to the eastern portions of the site; and decreased, albeit less dramatically, from the northern to the southern portions of the site. This trend was tested with the use of block excavations, which bore comparable results (Figure 16.3).

The distribution of total artifacts per unit refined the previous results observed within the STP data and identified areas that contained artifact concentrations. A total of 818 units were excavated at the site (Figure 16.3). The artifact count per unit ranged from 0-793, with an average count of 84 and a standard deviation of 86. The units were separated into groups according to count per unit: low, 0-31; medium, 32-98; and high, over 99.

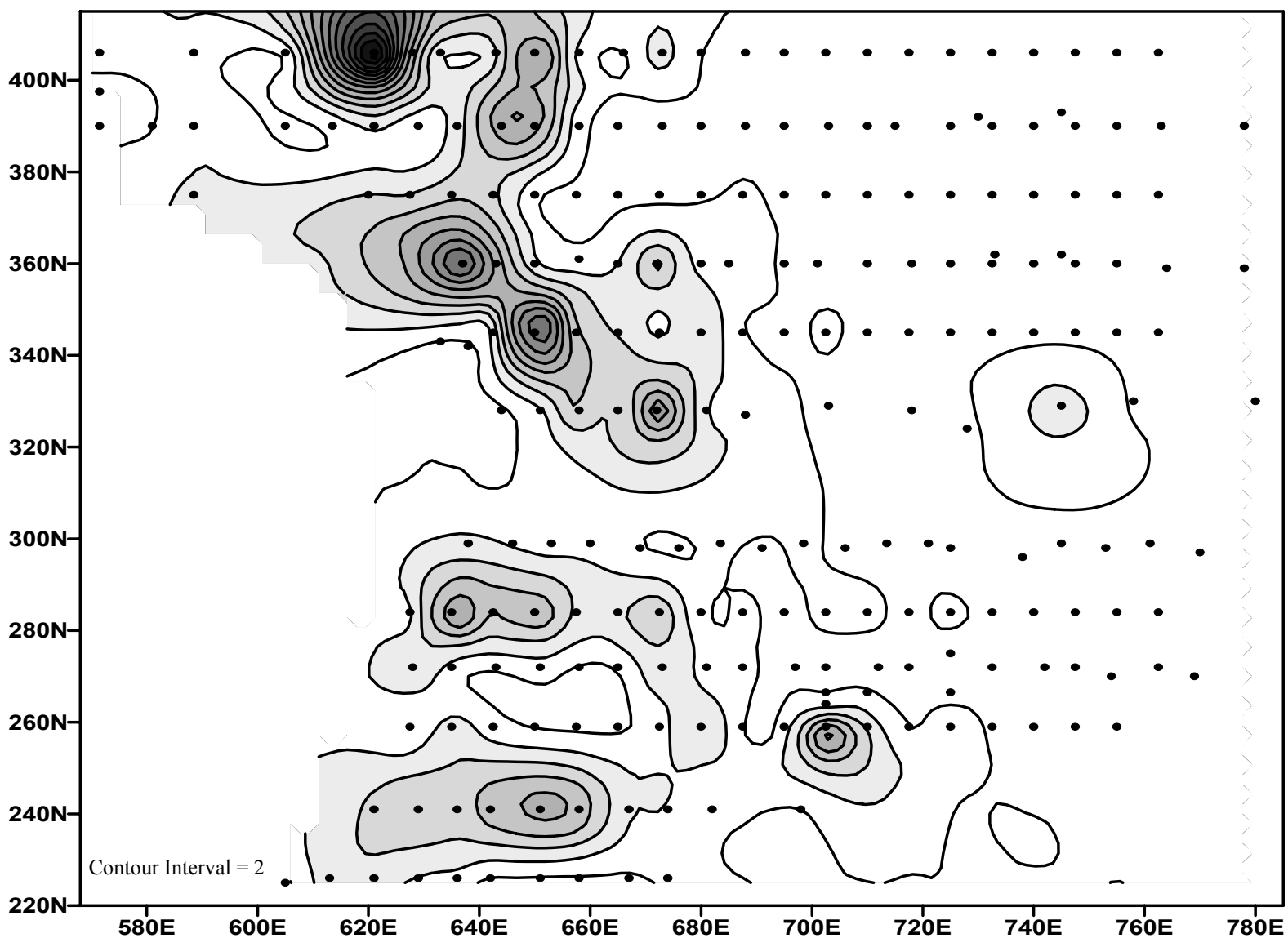


Figure 16.2 Distribution of Artifacts Recovered from Shovel Test Pits

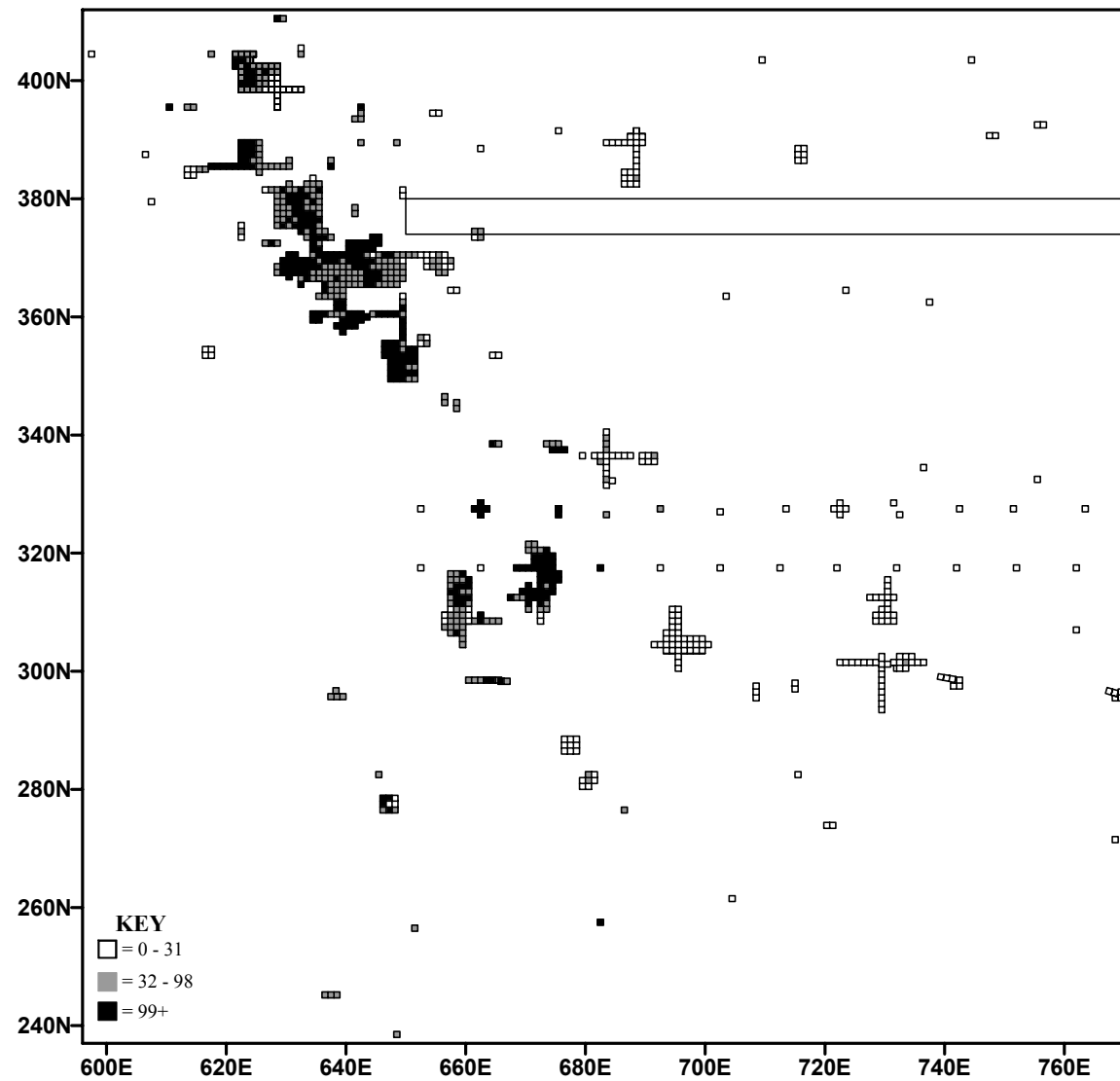


Figure 16.3 Site Distribution of All Prehistoric Artifacts Recovered from All Test Units

The western half of the site, located primarily within the unplowed treeline, evidenced the highest artifact counts. Its units contained mostly moderate to high counts, with a few exceptions. The Northwest Quadrant contained the largest contiguous block excavations and provided the most uninterrupted spatial data to analyze. The large excavation block that incorporated Loci G and F, and part of Locus H will be discussed extensively within the spatial analyses. Another area that showed contiguous high artifact counts was located in the center of the site, near the 670E gridline. Artifact counts remained high in the southwest quadrant of the site although no large areas of high artifact counts were identified. However, this may be a result of the more limited testing conducted in this area of the site. It is likely that further excavation in the southwest quadrant may have resulted in the identification of other dense artifact concentrations.

The eastern portions of the site, in the former orchard, consistently had low artifact yields per unit. This pattern was considered valid despite the fewer number of units excavated within this area. The variations observed within the artifact distributions across the site suggested a settlement selection preference along the bluff edge with consistently higher artifact yields obtained there. Furthermore, the low artifact yields in the eastern part of the site implied the differential use of space at the site and that a more limited range of activity occurred in that portion of the site. The excavation blocks tested the different areas of high, medium, and low artifact density for site wide comparison purposes.

Latent Features

Computer plotting is a valuable analytical tool for identifying latent features, which are artifact clusters that would not otherwise be readily apparent, that might enhance site interpretation. Aggregations of artifacts, such as intact TAS clusters or ceramic clusters are often identified during field excavations. These types of clusters, as well as basin features, are termed evident features. They retain their form after use, have well-defined boundaries, and may contain different artifacts and/or ecofacts than the surrounding sediments (Petraglia and Knepper 1998).

Evident features may represent either single-state or multi-state use-life histories depending upon the intensity of use, but still retain easily identifiable spatial bounds and physical attributes. On the other hand, latent features are those aggregations of artifacts that are not identified during excavation, as they do not have clear boundaries or evidence of single or multi-state activities. Latent features are still indicative of cultural behavior and may be indicative of intensive site occupation and/or reuse. Such intensity may have dispersed the original spatial boundaries, incorporated artifacts into new locations, and/or created an overlap of artifacts from several site activities. Examples of latent features include, but are not limited to, dispersed hearths and knapping clusters of a specific lithic material.

Latent features could be valuable at Hickory Bluff to identify discrete clusters within an otherwise palimpsest assemblage. Identification of latent features and the other artifacts that may be associated could indicate activity areas and relate to site structure and behavior. Latent features would be especially valuable if they could be linked to clear chronological indicators, such as diagnostic ceramics or projectile points, to again isolate portions of the site and suggest intra-site patterning that otherwise would go unrecognized. The identification of latent features

may also suggest areas for future lithic or ceramic refitting studies to more clearly demonstrate the spatial relation of the artifacts.

Artifact Assemblage and Feature Formation

Spatial analyses may also provide data to assess site formation processes. The data will be examined for associations or contrasts between the natural stratigraphy and feature contexts. Isolating where the artifacts are found will inform on the possible migration of artifacts and the integrity of the defined spatial limits of features. This level of analysis will be especially informative for TAS features for determining the level of dispersion that they have experienced, and whether the dominant forces were cultural or natural.

Ceramics – Distributions and Lot Refits

The ceramic data set was one of the most important assemblages from Hickory Bluff, both as a chronological indicator and an artifact type employed in the daily lives of the site inhabitants. Early distributions of ceramics indicated spatial clustering, which may help to determine discrete activity areas. Sherds representing the dominant ceramic ware types were plotted to assess their spatial relations and to observe any site structure evident from the locations of similar ceramics.

Ceramic type clusters will be assessed further with the aid of refit data provided by the detailed ceramic lot analysis (Appendix I). Ceramic lots consisted of sherds that, minimally, represent the same vessel either by directly conjoining or sharing specific, unique manufacturing traits. The locations of all sherds comprising a specific lot and its direct refits were overlaid on the general distribution plot for that type, to examine how closely the clusters correlate to specific lots and whether the sherds represent fewer vessels in many pieces or more vessels. Such assessment is also related to the general intensity of site use and can help to determine if intensity of use changed over time. This analysis will also inform on general site integrity, possible reuse, and/or cleaning behaviors that resulted in the artifacts' final location.

SPATIAL ANALYSES

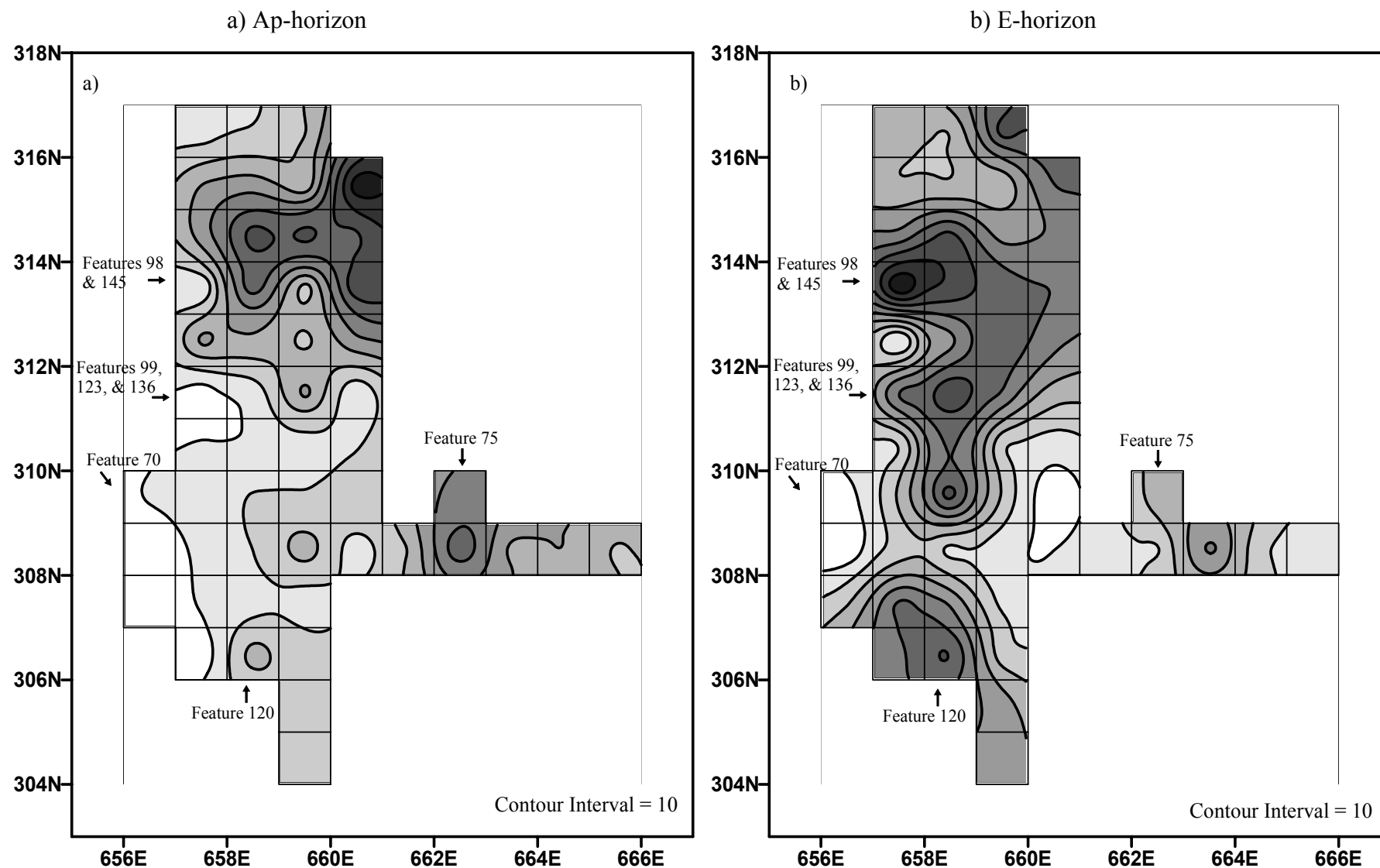
The spatial analysis, which consisted of the avenues detailed above, was undertaken and is presented for each of the major block excavations from the site (Figure 16.1). The block by block analysis was important as a tool for understanding the various patterns present within the site before assessing the site in its entirety. For each block, the first map presented is a location of all identified features to show their patterning; these maps then serve as reference points for the discussion of artifact distributions. In addition, for a basic level of consistency for each block, the first artifact distribution map presented is the distribution of all prehistoric artifacts from all proveniences (natural and features) within the block and is used to indicate the broadest trends. Basic analyses of artifact type were undertaken for each of the blocks, but may not always be presented in the text that follows. Basic artifact plots also suggested certain patterns or information to assess in more detail; however, these varied between blocks. As a result, several blocks have fewer figures and information presented than others.

The following subsections will present information for the excavation blocks across the site. These included: Locus A Blocks 1 and 2; Locus B; Locus C Blocks 1 and 2; Locus D; Locus E; Northwest Main Block, which included, Locus F, Locus G, and Locus H Block 1; Locus H Block 2; and Locus I. Unincorporated excavations provided comparative data on site formation, but will be discussed only when relevant to the larger excavation blocks. To facilitate artifact cluster analysis discussions for each block, the maps are presented with reference to evident features. Not all features are labeled within a block, nor are all features meant to specifically correlate with artifact clusters in all cases. Instead, they are used as a means to identify the clusters as they are discussed in the text.

One of the first levels of analysis conducted for the blocks was an assessment of artifact distributions by universal stratigraphy to assess site formation processes and the idea of scattering and clustering. Comparisons of A- and E-horizon distributions between different blocks produced different results, and blocks demonstrated varying degrees of scattering. Clear examples of the type of results produced across the site were evident for Locus A Block 1 and the Northwest Main Block.

The distribution of artifacts within the A-horizon and E-horizon (excluding feature proveniences) revealed different spatial clustering. In general, the prehistoric artifact counts were lower within the A-horizon and the clusters that were present lacked definition. The northern third of Locus A Block 1 appeared as one large artifact scatter that extended southwest to northeast (Figure 16.4). The greatest concentration of artifacts within this cluster was located at the northeastern edge of the block and appeared to continue east past the limits of excavation. Another less intense cluster was visible near Feature 75 along the eastern wing of the block. The southern portions of the block near Feature 120 appeared as an ephemeral scatter that lacked definition. The southwestern corner of the block near Feature 70 displayed a noticeable lack of artifacts within the A-horizon.

The spatial patterning of artifacts shifted within the E-horizon (Figure 16.4). This distribution displayed five clusters that were different from those identified in the Ap-horizon distribution. The northern third of the Locus A Block 1 now contained two separate and distinct clusters, as opposed to the scatter present in the Ap-horizon. The first cluster was noted along the west edge of the block in the vicinity of Features 98 and 145. The second was located north and east of the first, in the upper northeast corner of the block. This cluster was less dense than the first, but appeared to extend past the limits of excavation. It was also located slightly north and west of the densest artifact cluster identified in the Ap-horizon. The third cluster was located in the center of the block in the vicinity of Features 99, 123, and 136. This cluster was slightly less defined and contained two denser areas within it, separated by about 1 m. The fourth cluster was less dense than the others identified in the block. It was located in the eastern wing of the block near Feature 75. This position was shifted further to the east than the cluster noted in the Ap-horizon for this part of the block. The fifth cluster was located furthest south near Feature 120. It had increased density and maintained better spatial integrity in comparison to the other clusters. The artifact frequency increased for the southwestern portion of the block, which had displayed low frequency in the Ap-horizon.



The differences in the patterning of artifact distributions by different stratigraphic horizons within Locus A illustrated the plow disturbance. The plow zone distribution produced a scattered area of artifacts lacking well-defined clustering. The E-horizon produced better clusters that suggested intact spatial integrity and identifiable activity clusters. The differences noted between the horizons showed that the areas of highest density did not correspond. This lack of correspondence would make inclusion of Ap-horizon artifacts difficult to include in the analysis of spatial clustering within the block, as the context is unreliable. Those artifacts are still important, as they represent activity that occurred in that location, but identifying associations between them, the more intact clusters, and evident features found below them is not likely.

The Northwest Main Block of the site provided a different example of total artifact distribution by stratigraphy (Figure 16.5). This part of the site did not exhibit a plow zone, but instead contained an organic Ao-horizon. Such a horizon is characterized by bioturbation and near surface disturbance, but such influences are usually less intrusive than plow zone disturbances. As a result, a different type of dispersion pattern would be expected.

Generally, the Ao-horizon contained fewer artifacts than the E-horizon and therefore did not display the same degree of intensity within its clusters. The clusters evident in the Ao-horizon distribution tended to correspond to clusters also evident in the E-horizon distribution. These included clusters near Features 46, 158/176, 87/101/169, and Feature 1. Some differences in cluster location were also evident, however. The Ao-horizon displayed a cluster southeast of Feature 1, which did not correspond to a cluster within the E-horizon. The E-horizon contained a few more clusters as well, including a cluster just north of Feature 46. Another cluster became more evident along the eastern edge of Locus F, east of Features 158 and 176. The cluster noted to the north of Locus G, in the vicinity of Feature 1, also became better defined within the E-horizon. Several areas within both Loci G and H appeared as either gaps or areas of low artifact counts, which suggested that feature contexts in these units had yielded the majority of artifacts. In addition, the presence of artifact clusters around locations of evident TAS features after the feature artifacts were removed suggested the possibility of activity areas around these features or that artifacts had been displaced beyond the visible limits delineated for these features.

The comparison of the Ao and E-horizon distributions within the Northwest Main Block suggested that, in general, the two horizons corresponded and did not display the scattering of artifacts evident in plow zone contexts. The correspondence of both horizons suggested that the clustering noted in the Ao-horizon likely represented surface and bioturbation disturbance of the clusters evident in the E-horizon. It also implied that despite the minor vertical disturbance, horizontal integrity was maintained within the block and that in some cases, it would be appropriate to include artifacts from both horizons for assessing an artifact cluster, as the two may be related.

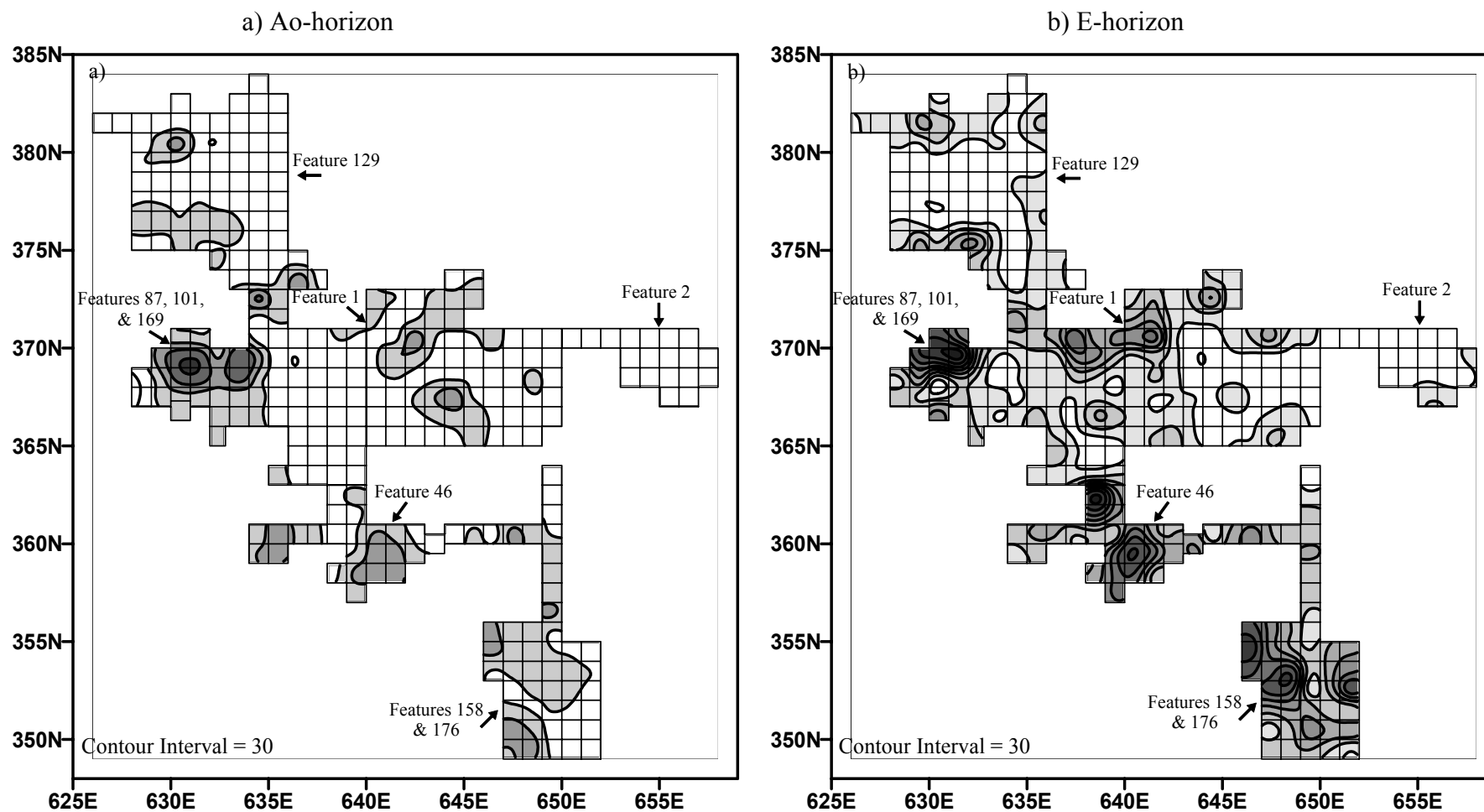


Figure 16.5 Northwest Main Block Distribution of Artifacts by Universal Stratigraphy

Comparisons of the artifact distributions between Locus A Block 1 and the Northwest Main Block led to important methodological considerations. It clearly demonstrated the scattering of artifacts present within plow zone contexts and the dispersion of clusters that could result. On the other hand, Ao-horizon distributions corresponded closely to the E-horizon and suggested that the two were complementary sets of data in some cases despite some differences that likely represented bioturbation and or soil development.

For instance, ceramic cross-mends were obtained regardless of stratigraphy. Therefore, cross-mend data were compared to the distribution of total ceramics of a particular type, also regardless of stratigraphy. Comparison of soil horizon distributions also demonstrated the differing resolution of the data that could be obtained within a block and how these distributions could highlight the appropriate data to include.

Within the block by block spatial analysis, various attributes were included, dependent upon the specific context and integrity. The levels of scattering within the data still relate to behavioral activities and depositional information for the site. At the same time, there are also high integrity and clear cluster patterns evident within the data. The following sections will demonstrate both kinds of evidence where appropriate.

Locus A Block 1

Locus A was located in the southwest quadrant of the site along the bluff edge. This area was considered a moderate to high artifact density zone and showed evidence of both intact and plowed A-horizons within the block. Excavations in Locus A Block 1 identified 44 discontinuities in the profile (Figure 16.6); these included eight basins (Features 54, 67, 76, 120, 137, 161, 170 and 171), six TAS concentrations (Features 98, 99, 123, 136, 145, and 146) and one cluster of diagnostic ceramics (Feature 114). Geomorphic processes accounted for 10 of the identified irregularities, Features 21, 48, 52, 53, 70, 73, 74, 97, 110, and 155. A variety of biotic agents produced 19 anomalies: Features 49, 50, 51, 75, 95, 96, 105, 106, 109, 115, 121, 122, 127, 133, 134, 135, 152, 154, and 157.

The planview of the block illustrated the distribution of features within the block and the degree of both overlap and horizontal integrity. Several basin features overlapped with geomorphic irregularities. Feature 67, a medium basin, truncated the E-horizon above geomorphic Feature 110, while basin Features 170 and 171 cut into geomorphic Feature 70. The distribution of TAS clusters in the block was also interesting as the more discrete, tightly packed clusters such as Features 98, 99, and 123 were located to the west of the more diffuse scatters of stone, Features 145, 136, and 146, respectively. Biotic disturbances were noted throughout the block, with a concentration of rodent burrows located in the eastern wing of the block.

The distribution of all prehistoric artifacts recovered in all proveniences within Locus A Block 1 resulted in the identification of four distinct concentrations (Figure 16.7). The first concentration had lower overall counts than the others, but was discrete and located at the southern end of the excavation block in the vicinity of Feature 120. The second cluster was located along the eastern wing of the block in the area of Feature 75. The third concentration was located close to the center of the block near Features 99, 123, and 136. It was more diffuse than

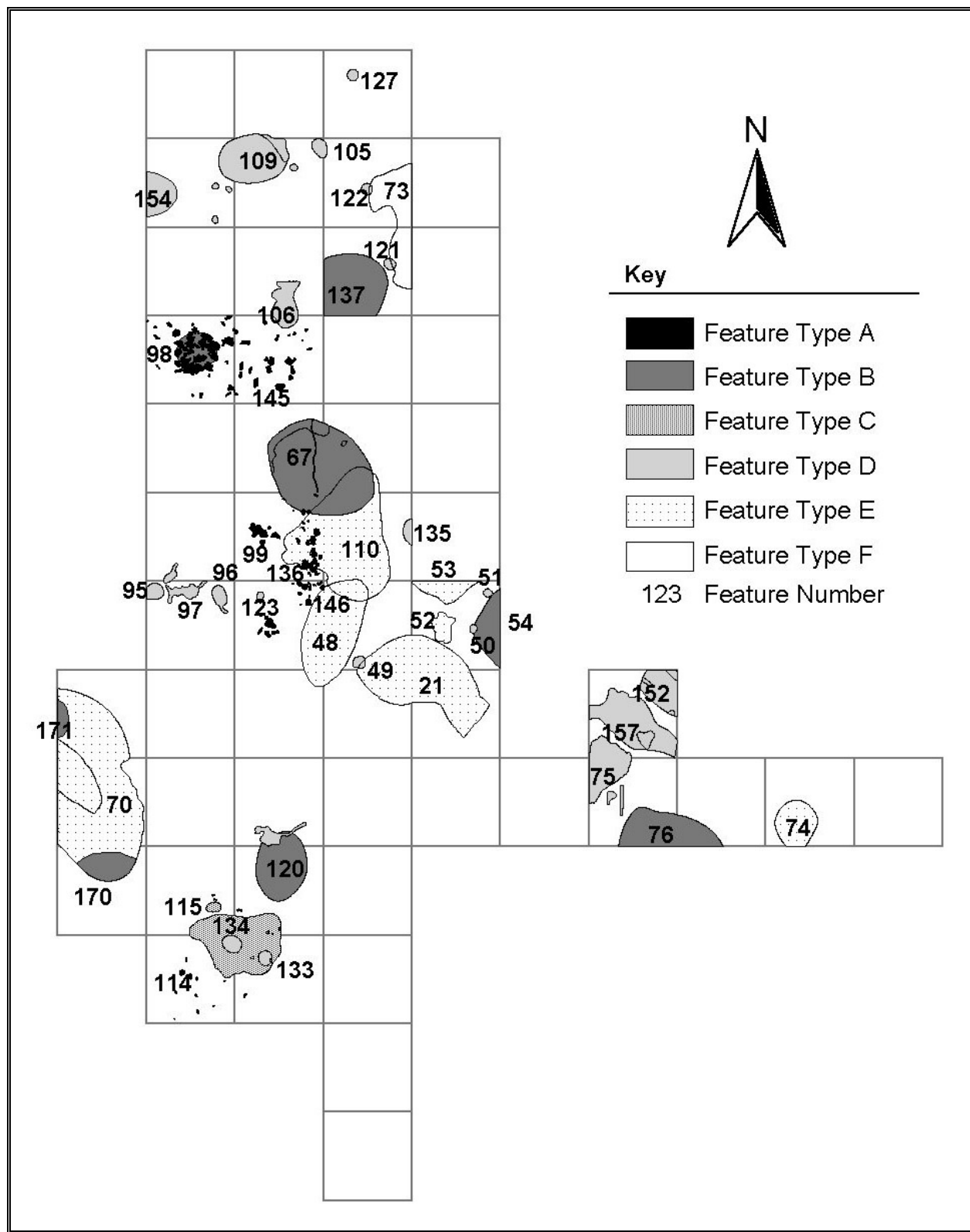


Figure 16.6 Locus A Block 1, Feature Locations

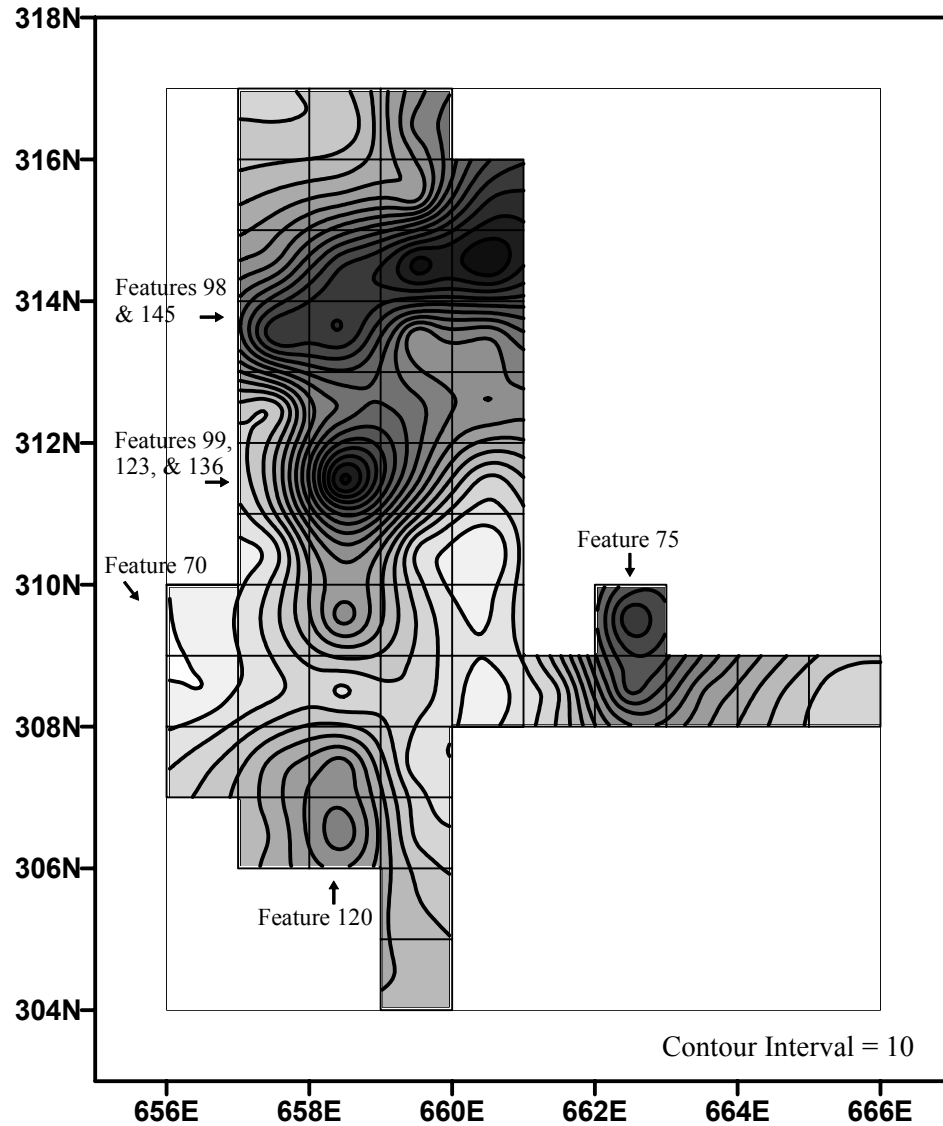


Figure 16.7 Locus A Block 1, Distribution of All Prehistoric Artifacts

the clusters identified to the south and contained two portions: a dense area to the north and a less dense area at its southern end. The fourth cluster was located furthest to the north, was the most dense and spread over the greatest distance. The western portion of this large cluster was near Features 98 and 145. The remaining portion of the cluster trailed into the eastern edge of the block and was not associated with any delineated feature. The number of artifact concentrations encountered in Locus A Block 1 and the presence of spatially discrete clusters suggested the benefits of plotting the artifact information in a variety of ways to assess the nature of the initial artifact clusters and how they may relate to the greater site structure. For the distributions of artifacts by type, the contour interval was reduced to increase the clarity of the cluster analysis.

Lithic Distribution

The distribution of lithic debitage (flakes and chips) and cores within the E-horizon displayed three identifiable clusters (Figure 16.8). The first cluster was located south of Feature 120 at the southern end of the block and likely extended further past the limits of excavation. This location did not correspond to any previously identified artifact clusters including plow zone concentrations. This cluster exhibited a higher level of spatial integrity because it was not truncated by plowing. The second cluster was large and occurred close to the center of the block near Features 99, 123, and 136. It consisted of two dense areas separated by about 1 m. This arrangement was different from the previous distributions, and showed a greater refinement and definition for the cluster. The third cluster was located close to the northeastern corner of the block opposite of Feature 98 and showed a degree of separation from the larger cluster just to the south. This cluster was located in about the same place as a cluster identified in the distribution of total artifacts.

Negative clusters, or areas with low frequencies of debitage, were also identified from the distribution of lithic debitage. These are important to consider spatially, as they may indicate site structure or the separation of space for use. The largest negative space occurred along the eastern edge near the center of the block and west of Feature 75. It extended south and east down the excavation wing. Another negative area occurred along the west edge of the block and was associated with Feature 70, a large fluvial disturbance that replaced the E-horizon in several units.

When the debitage was examined by material type, no significant concentrations of material or clear clusters were identified. The majority consisted of jasper and quartz, which was true of the site in general. However, a pattern between debitage and groundstone tools was established for the third cluster.

Four test units (N315 E659, N315 E660, N315 E661 and N316 E661) contained the elevated artifact counts that comprised this cluster. The size grade breakdown of the lithic cluster suggested an area of tool maintenance or finishing (Table 16.1). Of the debitage, 80 percent was 2 centimeters (cm) or less and only 1 percent was between 4 cm and 5 cm. The site average was 61 percent at size grade 2 and 1 percent at size grade 5 or larger; size grade 1 is unreliable as it is within the range that would pass through the screen, but is included for emphasis. Although the lack of larger pieces and relative abundance of smaller artifacts suggested tool finishing, it also might suggest lithic reuse, whereby larger fragments of lithic material were removed or reduced further. In this way, the useable size grades of debitage would no longer be present. Three hammerstones also were located within this lithic cluster in Unit N315 E661 (1838-21, 1842-1, 1843-1). All of these hammerstones displayed heavy battering suggestive of intense use. Their presence within this sizable lithic cluster suggested that the location represented an area of lithic reduction that has maintained spatial integrity.

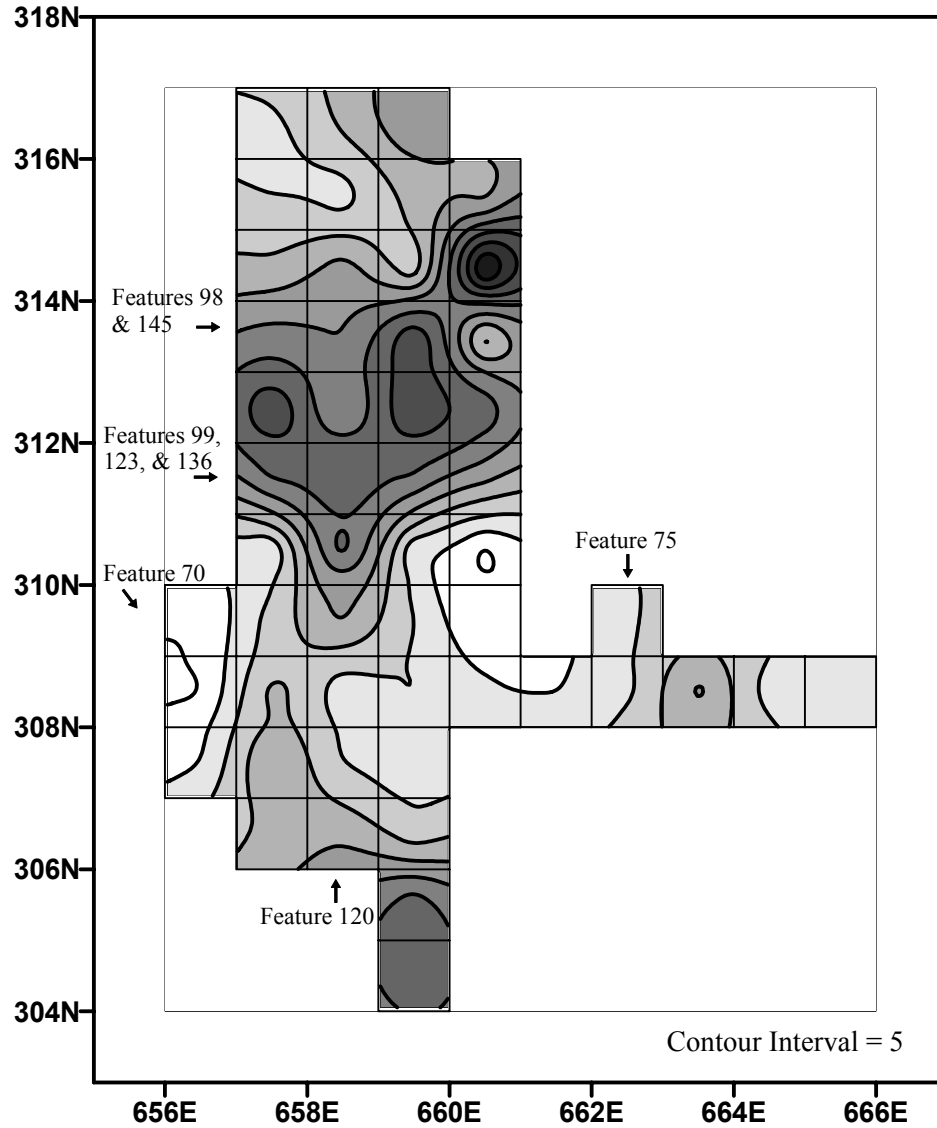


Figure 16.8 Locus A Block 1, Distribution of Lithic Debitage within the E-horizon

**Table 16.1 Locus A Block 1, Lithic Cluster,
Debitage Size Grade Breakdown**

Size grade	Total Count	Percent
1	26	11
2	158	69
3	31	14
4	12	5
5	2	1
TOTAL	229	100

TAS Distribution

The next artifact type considered was TAS. When plotted for the E-horizon only, some cluster patterns emerged that were otherwise masked by plow zone disturbance or the elevated counts associated with the several evident TAS features identified in Locus A Block 1 (Figure 16.9). The overall counts for TAS within the E-horizon accounted for almost half of all the TAS found in Locus A Block 1, which suggested a certain amount of translocation from plowing or natural dispersion.

Five distinct TAS clusters were identified in this plot. The first was located in the southwest portion of the block in the vicinity of Feature 120. It had a lower frequency than the other clusters and no evident TAS feature was identified in close proximity to this cluster.

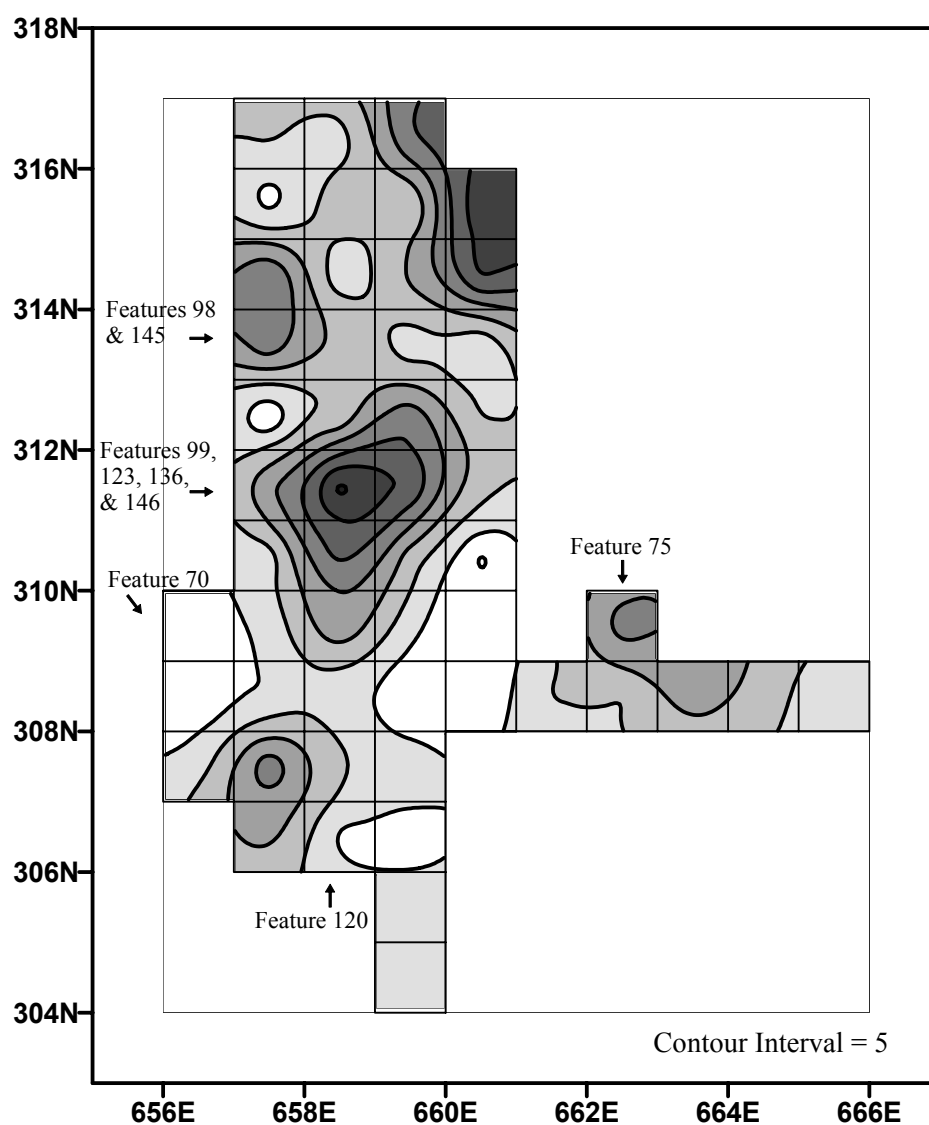


Figure 16.9 Locus A Block 1, Distribution of TAS within the E-Horizon

The second cluster was noted in the eastern excavation wing near Feature 75 and also did not correspond to the location of an evident TAS feature. A total of 101 TAS artifacts that weighed 974.9 grams (g) was contained in N310 E663 and represented the majority of this cluster. An additional 59 TAS artifacts that weighed 942.6 g were located in the adjacent Unit N309 E663. Together, the TAS artifacts in these two units accounted for 55 percent of the artifacts in these two units, which did not display noticeably increased counts for any other artifact types. The amount of TAS present, by count and weight, was within the range calculated for evident TAS features across the site, and larger than several within this block. The cluster generated in the computer plot of the data may represent a dispersed TAS feature. Also contained within these two test units were Features 75, 152, and 157, which consisted of several overlapping biotic disturbances. The dispersion of the TAS could be either from the natural disturbances noted or as a result of the secondary deposition of these artifacts from site maintenance or reuse activities.

The third cluster, the largest in terms of area and total artifact counts, was noted within the center of the block. This area corresponded roughly with the locations of TAS Features 99, 123, 136, and 146, and suggested that these features may have experienced some degree of dispersion that resulted in movement of TAS outside of the evident spatial bounds of these features. The fourth cluster was located along the west edge of the block and corresponded closely to the location of Feature 98, and again suggested some dispersion from this TAS feature.

The fifth cluster was located in the upper northeastern corner of the block and likely extended east past the excavation limits. This location was also not associated with an evident TAS feature. The fifth cluster was not as dense as the areas associated with evident stone features and was also not as extensive as the lithic debitage in this area. However, the recognition of TAS in this small area was important. The elevated counts were restricted to N316 E661, which contained 84 TAS artifacts with a mean weight of 10.6 g. The relative isolation of this TAS concentration suggested that it might have represented a dispersed feature or a secondary accumulation from site maintenance or reuse activities. Interestingly, this cluster of TAS was found within the unit that contained the lowest counts of lithic debitage within the debitage cluster noted there. This result further suggested the possibility of discrete activity areas within this section of the site.

Ceramic Distribution

The plot of ceramic distribution resulted in the identification of three discrete clusters, and may help to isolate activity areas to relative chronological sequences (Figure 16.10). The first was located at the southwest section of the block and coincided with the location of an evident ceramic cluster, Feature 114. The increased counts of ceramics within the E-horizon suggested that the ceramics in this cluster likely dispersed from the visual spatial limits delineated for Feature 114. The second cluster was located just north of the first and east of Feature 70. It displayed a good degree of separation from the other clusters, being surrounded on most sides by areas of low counts. The third cluster was large and located in the northern third of the block near Features 98 and 145. It was adjacent to some smaller clusters, which did not have high enough counts to be considered separate, distinct clusters. Another secondary cluster was visible

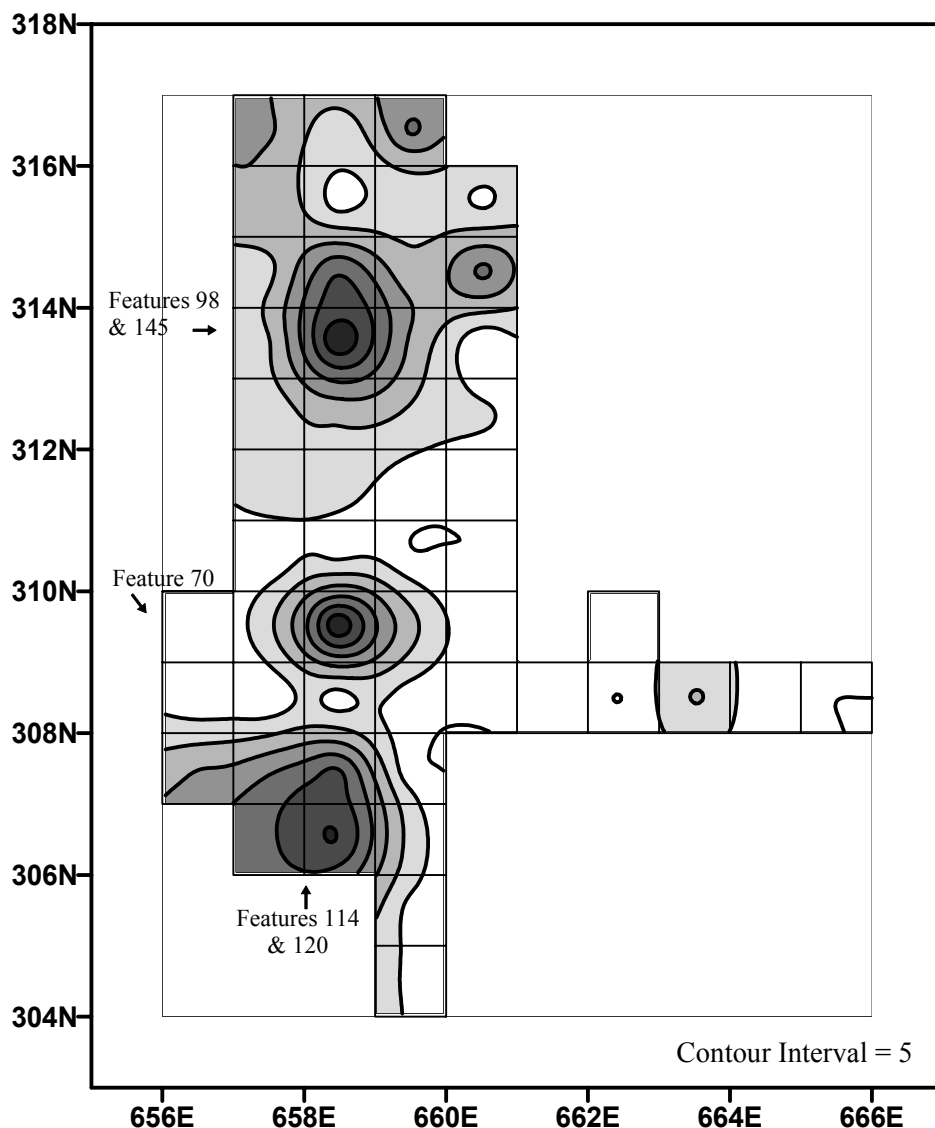


Figure 16.10 Locus A Block 1, Distribution of Ceramics within the E-horizon

along the eastern excavation wing. However, its counts were also too low to be considered with the larger clusters. The degree of separation that was apparent between the ceramic clusters was promising and suggested that some spatial integrity was apparent and could be examined with greater scrutiny for more refined types of information.

The distribution of ceramics by ware types within Locus A Block 1 identified several distinct clusters that remained relatively discrete by chronological period. The Early Woodland was represented in the block by Marcey Creek ceramics, and to a lesser extent Wolfe Neck ceramics. The Middle Woodland was represented by Clay Tempered ceramics and by Hell Island wares. When the types were plotted separately, distinct clustering by type was observed (Figure 16.11 and Figure 16.12).

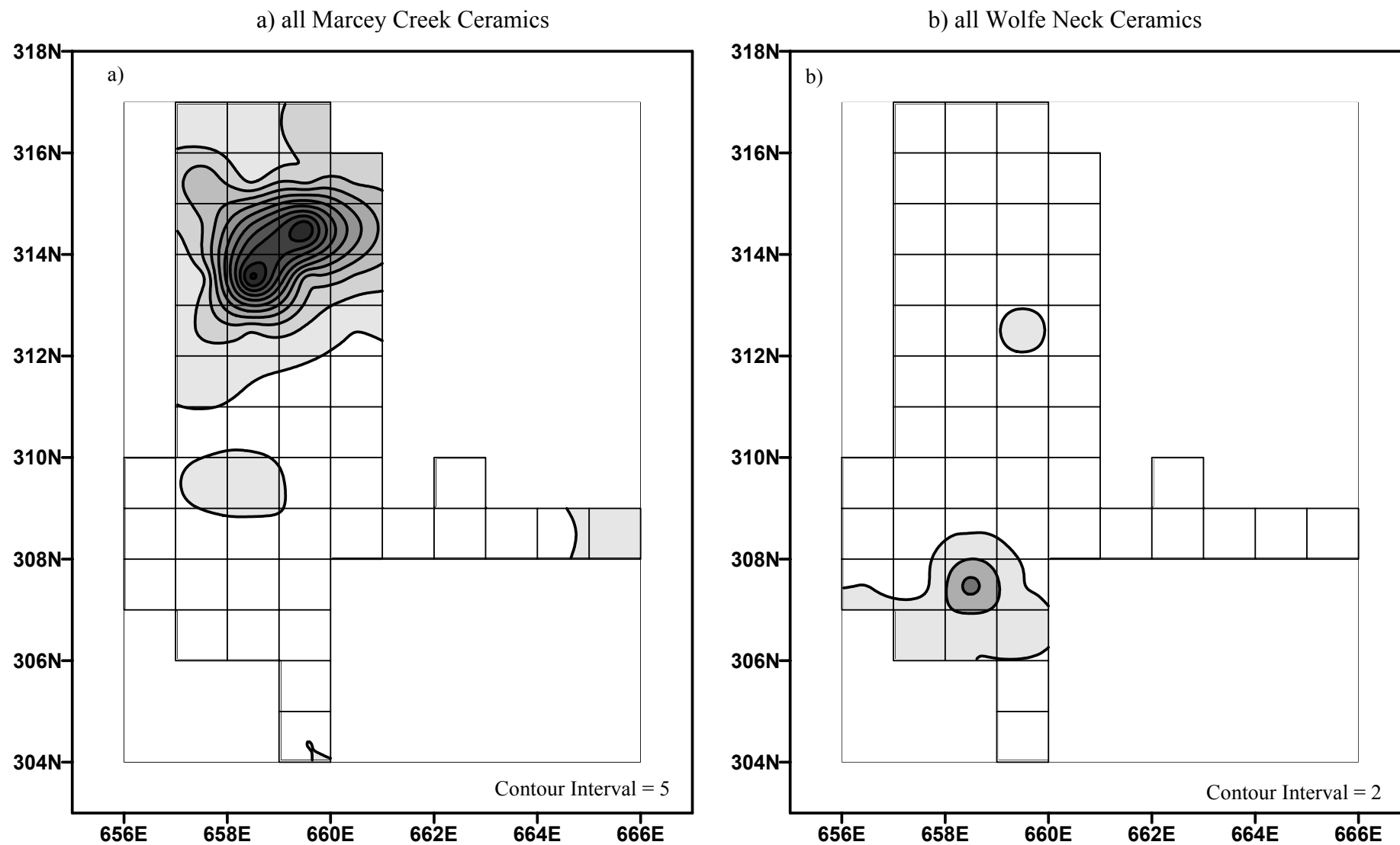
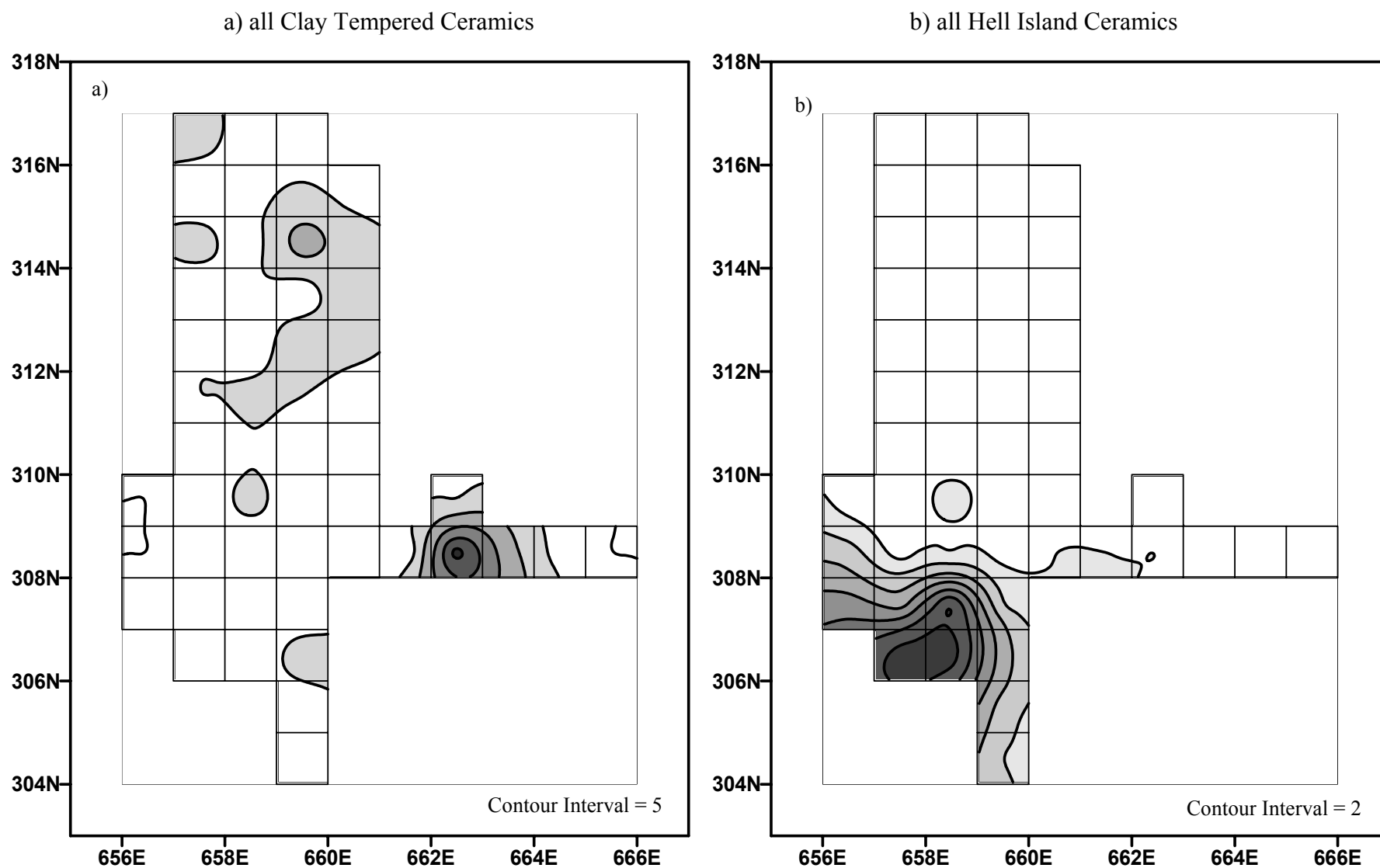


Figure 16.11 Locus A Block 1, Distribution of Early Woodland Ceramics



Marcey Creek was the dominant ceramic type recovered in the block. It was found in a large concentration that was restricted to the northern third of the block. This location coincided with the ceramic cluster identified in the E-horizon distribution of ceramics. The cluster remained spatially separated from the cluster of Wolfe Neck and Hell Island ceramics found at the southern end of the block. While some overlap was evident with a smaller concentration of Clay Tempered ceramics, the counts for Marcey Creek were higher than those for the Clay Tempered ceramics found in this part of the block. The predominance of Marcey Creek ceramics in this part of the block suggested temporally discrete activity areas.

A single lower density cluster of Wolfe Neck ceramics was found at the southern end of the block. This area also contained a heavy concentration of Hell Island ceramics, a later, Middle Woodland ware. The presence of both clusters within this small area was indicative of site reuse and reoccupation, a pattern commonly encountered at Hickory Bluff. Interestingly, the Marcey Creek and Wolfe Neck wares maintained clear horizontal separation from each other.

Clay Tempered ceramics were found with lower frequency in Locus A Block 1 than the average found across most of the site. One main cluster was identified along the eastern wing of the block in the vicinity of Features 75 and 157. Another ephemeral scatter was located along the northeastern portion of the block, but was of lower frequency than the Marcey Creek ceramic cluster also identified in that portion of the block. The primary Clay Tempered ceramic cluster maintained horizontal separation from the other ware types found in the block.

Hell Island ceramics were not found with high frequency at Hickory Bluff. The cluster of Hell Island ceramics identified in Locus A Block 1 represented a discrete cluster of a ware type that had limited presence at the site. The cluster was found in the southwest corner of the block and included the ceramics that comprised Feature 114, an evident ceramic cluster. Hell Island ceramics also were recovered from Feature 120, a small basin, and Feature 70, a large fluvial discontinuity of the soil profile. The cluster of Hell Island ceramics overlapped in location with a cluster of Wolfe Neck ceramics noted in the block, but remained separated from the Clay Tempered and Marcey Creek clusters in the block.

To further assess the clusters of ceramics identified in the block, in the applicable cases, ceramic lot and refit information were overlaid on the total distribution of that particular ware. Plots of this type are valuable for examining site formation processes and the nature of particular clusters, for instance, whether clusters are the result of one vessel broken into many pieces, or several vessels.

Vessel Lot CN19 consisted of six sherds. Five of these were located within Locus A Block 1. One other sherd from this lot was found in an unincorporated excavation located 6 m south of the main block (Figure 16.13). The location of this sherd outside of the block suggested movement of the vessel after its initial breakage, either through reuse or cleaning behaviors or by some natural process. Within Locus A Block 1, the distribution of sherds from Vessel Lot CN19 coincided with the ephemeral scatter of Clay Tempered ceramics located in the northeast corner of the block. The artifact counts within this scatter were not high and Vessel Lot CN19 likely represented a significant portion of the identified cluster. Direct mends were obtained for two sherds recovered from a single test unit and for two sherds in adjacent test units. Within the block, Vessel Lot CN19 was a fairly localized cluster with cross-mends helping to tie the

locations together. The presence of the outlying sherd, however, somewhat mitigated the interpretation of the lot as being spatially discrete.

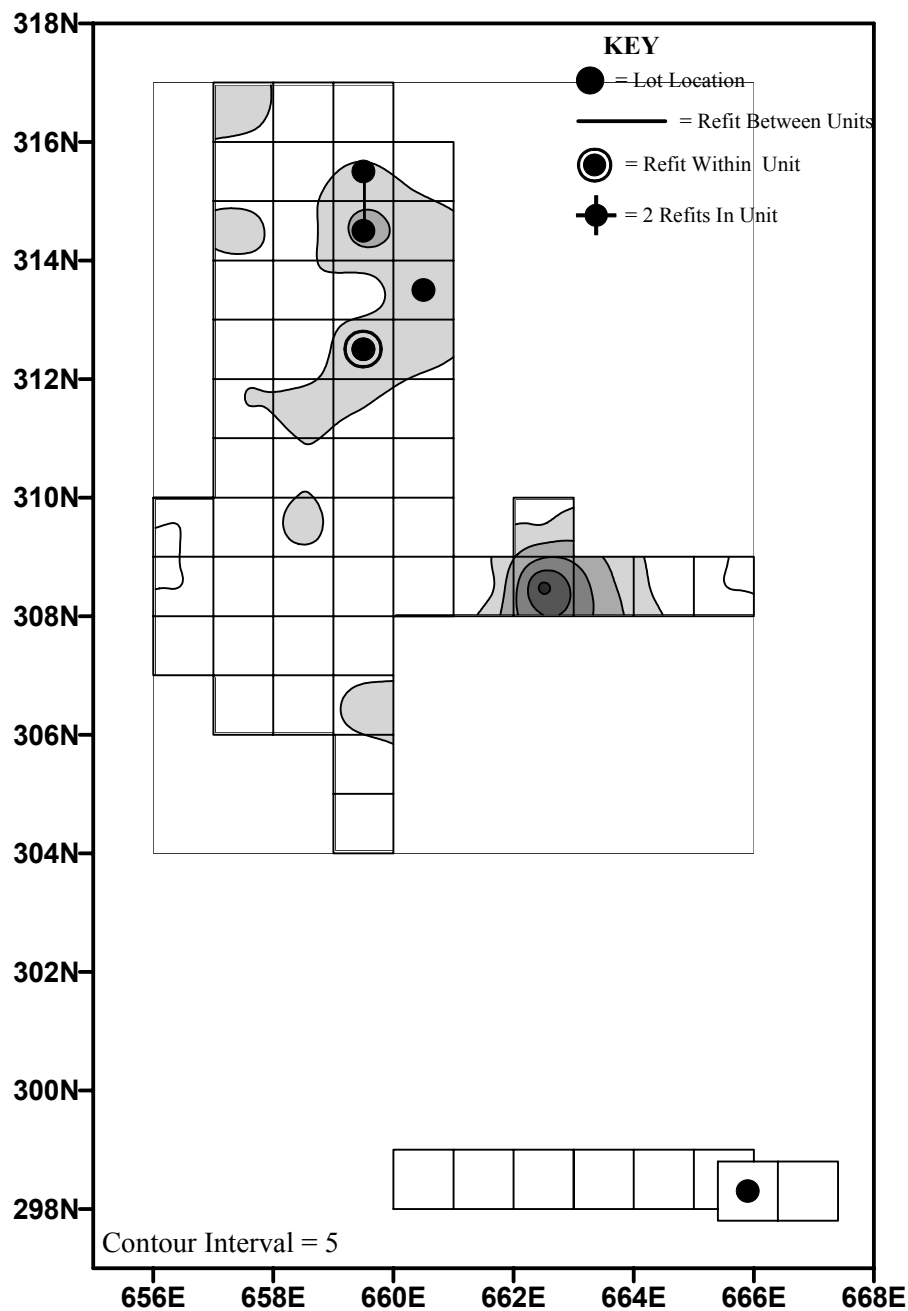
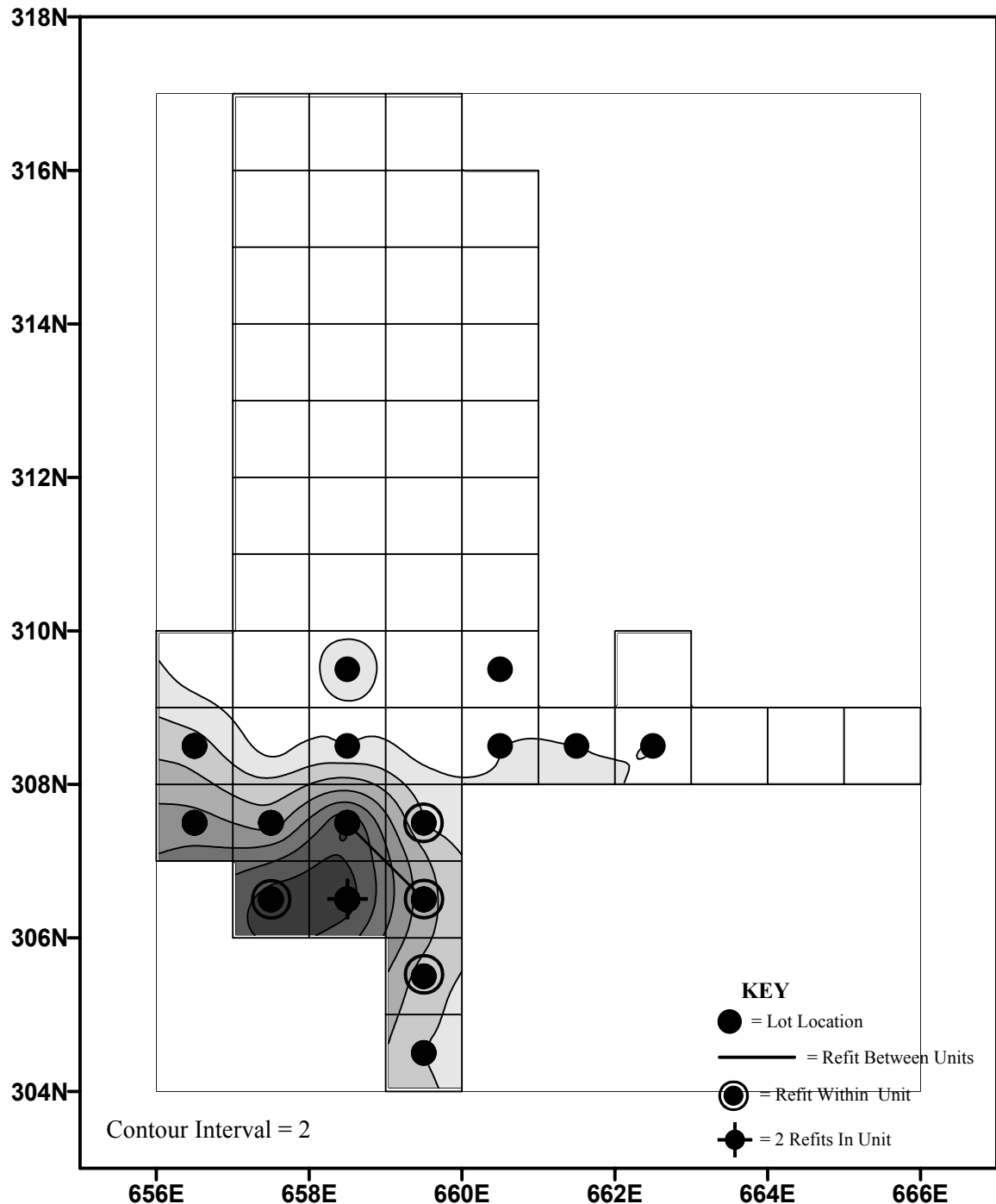


Figure 16.13 Locus A Block 1, Locations of Vessel Lot CN19, Overlaid on Distribution of All Clay Tempered Ceramics

Locus A Block 1 contained the greatest concentration of Hell Island ceramics at the site. A large cluster was located in the southwest corner of the block. Investigation of this cluster revealed that it was almost entirely the result of a single vessel lot, H3. Vessel Lot H3 comprised 81 total sherds; only one Hell Island ceramic in the cluster was not a part of Vessel Lot H3. The lot was found in 16 contiguous test units (Figure 16.14). Refit groups were found in five test units, which

included a test unit with two refit groups within it. An additional refit group was identified between two contiguous units. Direct cross-mends were not obtained for the majority of the lot; however, the lot was unique and easily distinguished from the rest of the block subassemblage.



**Figure 16.14 Locus A Block 1, Location of Vessel Lot H3,
Overlaid on Distribution of All Hell Island Ceramics**

Vessel Lot H3 also was recovered from an evident ceramic cluster (Feature 114), a basin (Feature 120), and a geomorphic discontinuity (Feature 70). The location of the sherds was

fairly discrete as the units were contiguous, but in its entirety, Vessel Lot H3 exhibited a small amount of separation between its elements, in some cases, over 6 meters (m). The overlay of the lot locations and the contour interval illustrated the possibility that a wide and dense cluster could result from a single ceramic lot. In this case, Locus A Block 1 contained the densest cluster of Hell Island ceramics, which resulted from a single vessel lot.

Most of the clusters of ceramics noted in the E-horizon were related to specific ware types as observed in the distributions of ceramics by type. The northern third of the block was associated with a large cluster of Marcey Creek ceramics and, to a lesser extent, an ephemeral scatter of Clay Tempered ceramics. The cluster noted in the southwest of the block was associated primarily with a large, dense cluster of Hell Island ceramics and, to a lesser degree, Wolfe Neck ceramics. The cluster located just to the north of this, however, was not as evident but was likely also associated with the Hell Island cluster noted in the block. The small cluster along the eastern excavation wing was less evident in this plot, but was associated with Clay Tempered ceramics.

Chronological Distribution

The locations of projectile points in the block provided less clear spatial associations when viewed with the ceramic distributions (Figure 16.15). Twelve projectile points were recovered from Locus A Block 1 (Table 16.2). Of these, seven were points more typically associated with the Late Archaic period, considered pre-ceramic technology, although their date ranges were wide and overlapped with dates for early ceramic wares. These included four Lackawaxen varieties and three Bare Island points. Two Lackawaxen points were located in the Marcey Creek ceramic cluster, one was located in the Hell Island ceramic cluster and in the area of the Wolfe Neck ceramic cluster, and the fourth was located in area to the north of the Clay Tempered ceramic cluster. One Bare Island point was located just adjacent to the Marcey Creek cluster, while one was in a relatively open area, and the third was found on the periphery of the Hell Island ceramic cluster. Of the remaining five projectile points found in Locus A Block 1, one was a Selby Bay Middle Woodland point, and the other four were not typed. The Selby Bay point was found in an area not closely associated with a particular ceramic type, although it was near an ephemeral Marcey Creek cluster and the wide scatter of Clay Tempered ceramics. The incongruity between ceramic and projectile point distributions does not diminish the importance of the ceramic clusters. Patterns of occupational overprinting were common at Hickory Bluff, as was evidence of reuse, which could include lithic tools. Projectile points are also singular artifacts, whereas ceramic clusters are composed of many artifacts.

Summary

Plots of artifacts recovered from Locus A Block 1 identified several spatial patterns including three lithic debitage clusters, five clusters of TAS, and four clusters of ceramics. The level of integrity for the identified clusters was maximized when considering only the E-horizon artifacts, as the A-horizon distributions reflected plow zone disturbance. Interestingly, the clusters of the different artifact types also maintained spatial discreteness from each other, which could be the result of differential space use by activity. The plots of ceramics produced spatially

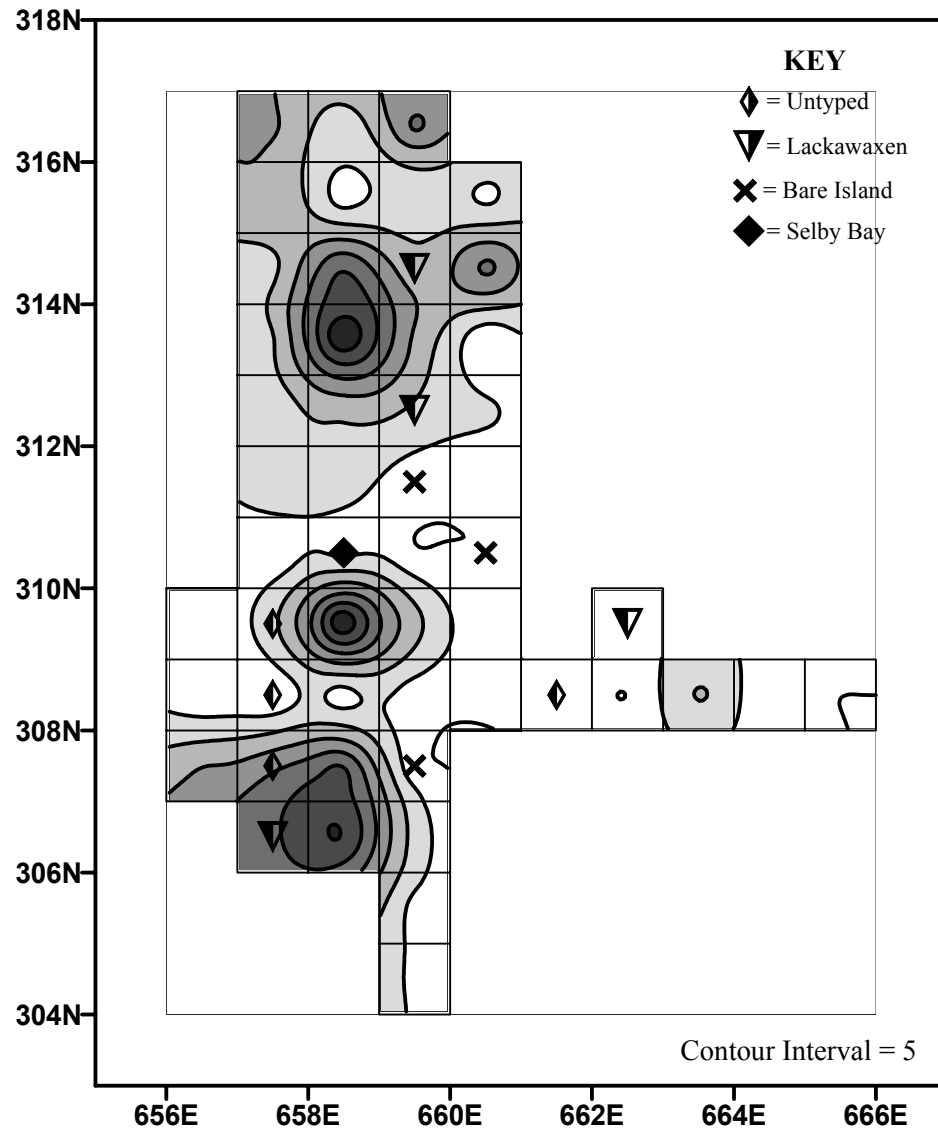


Figure 16.15 Locus A Block 1, Locations of Projectile Points and Typology, Overlaid the Distribution of All Ceramics Recovered from the E-horizon

Table 16.2 Summary of Diagnostic Projectile Points from Locus A Block 1

Catalog number	Typology	Chronology
673-2	Bare Island	Late Archaic
920-1	Bare Island	Late Archaic
954-4	Bare Island	Late Archaic
961-1	Lackawaxen	Late Archaic
970-24	Lackawaxen	Late Archaic
1635-1	Selby Bay	Middle Woodland
1745-8	Lackawaxen	Late Archaic
2124-6	Lackawaxen	Late Archaic

discrete areas by type, and some areas of overlap. These more discrete areas may help in linking the other artifact clusters identified to a relative chronological sequence. The data obtained from ceramic cross-mends and distributions further assessed the integrity of the clusters and site formation processes, through observation of their degree of diffusion.

Locus A Block 2

Locus A Block 2 was located in the southwest quadrant of the site, an area that ranged from medium to high artifact density. The main portion of the block was located approximately 8 m east of Locus A Block 1. Block 2 was located entirely outside of the treeline and exhibited a well-defined plow zone in all units. Excavations in the block identified a total of 13 features (Figure 16.16). These included eight large basins with varying degrees of biotic disturbance (Features 406, 407, 408, 409, 410, 411, 412, and 413); one medium basin (Feature 422); one small basin (Feature 414); a scatter of TAS (Feature 417); a cluster of diagnostic artifacts (Feature 415); and a surface feature of compacted soil (Feature 416). Distribution of the features evidenced a high degree of overlap between the large basin features, as only Features 406 and 410 did not overlap with other large basins. The ceramic cluster (Feature 415) and small basin Feature 414 were located in an area of overlap between Features 408 and 412, and adjacent to the compacted soil of Feature 416. The scatter of TAS, Feature 417, was found within the boundaries of basin Feature 407. The medium basin, Feature 422, truncated the larger basin Feature 409. Several of the large basins evidenced biotic disturbances that varied from tree root intrusions to large rodent burrows. The latter was especially evident in the northeast corner of Feature 406. The degree of overlap evident within the block suggested heavy and repeated use of the area.

Locus A Block 2 contained some of the highest total artifact counts per unit of any block at the site. Three clusters of artifacts were identified from the distribution of total artifacts (Figure 16.17). The first cluster was the densest concentration of artifacts and located along the eastern edge of the block in association with Feature 406. The second dense cluster was located to the south and west side of the block in the area of Features 408 and 412. The third cluster was located in the northeast corner of the block, north and west of the first major cluster. An area of low artifact density was evident along the southernmost portions of the block, in the vicinity of a probable natural, fluvial episode (Feature 19). The remainder of the block displayed relatively uniform artifact distributions and maintained total counts above average for the site. The high counts and degree of feature overlap evident in the block suggested significant intensity of use over time. Locus A Block 2 was the only block located outside of both the treeline and Northwest Quadrant to evidence such high intensity and it contained the highest artifact yields of the units that contained a plow zone.

Locus A Block 2 contained a series of several overlapping large basin features that truncated the natural stratigraphy for most of the block. As a result, the majority of artifacts were recovered from either plow zone or feature contexts. For the distribution of artifacts recovered from the plow zone, the contour interval was reduced due to lower counts (Figure 16.18). This plot revealed three dense artifact clusters that were different than the results obtained from the distribution of total artifacts. The densest was observed on the western edge of the block, which appeared as an area of lower artifact density in the distribution of all artifacts and suggested that the majority of artifacts in these units were recovered from the plow zone.

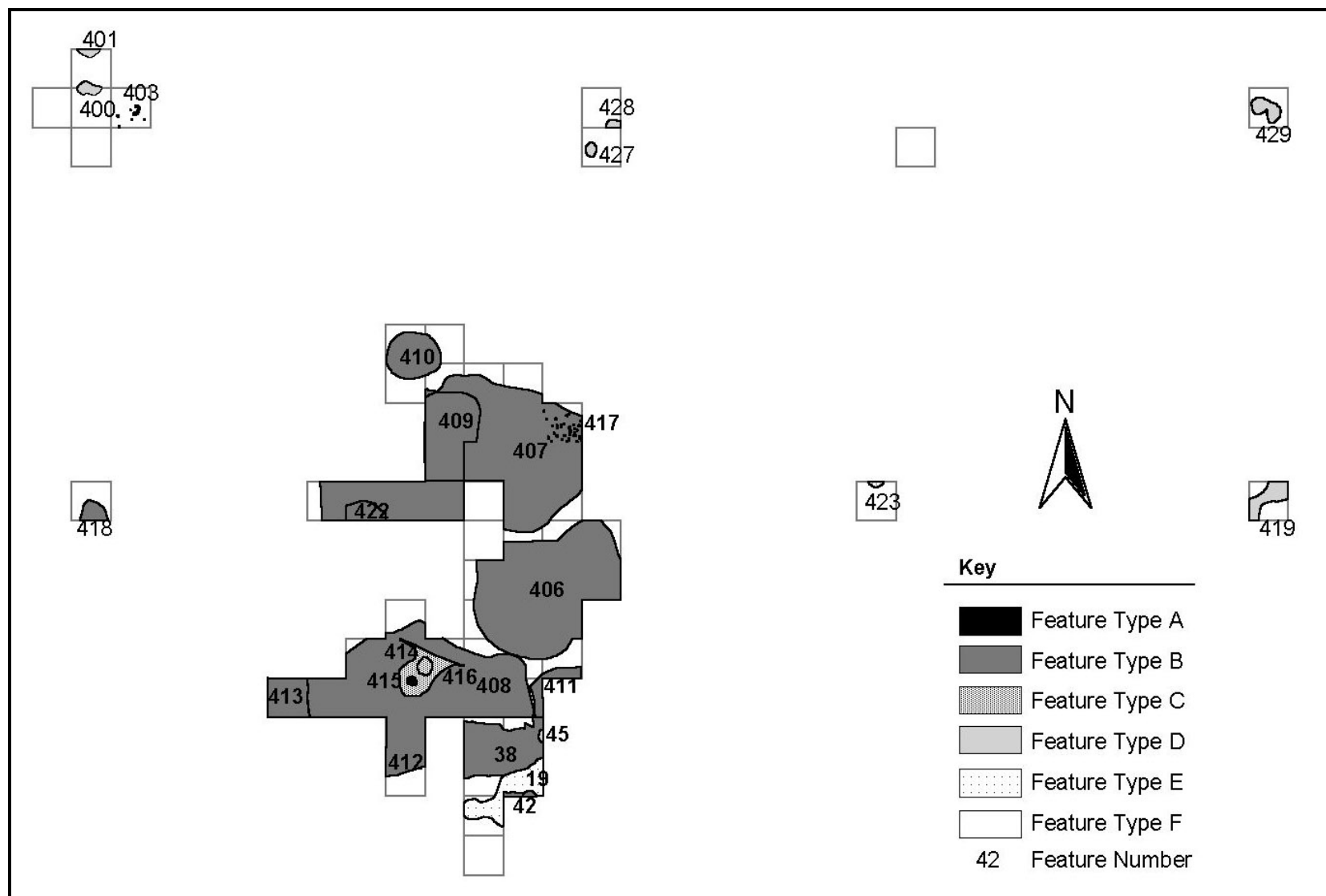


Figure 16.16 Locus A Block 2, Feature Locations

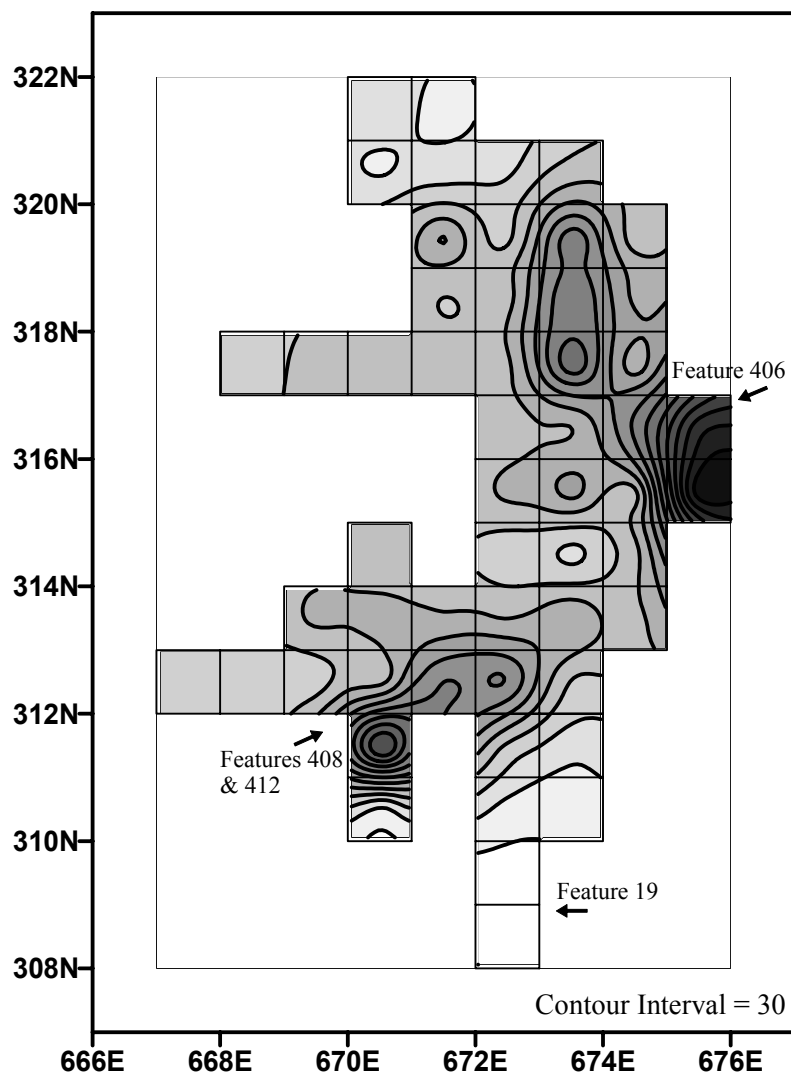


Figure 16.17 Locus A Block 2, Distribution of All Prehistoric Artifacts

Two clusters were identified in the eastern portion of the block, in the same location as noted in the distribution of all artifacts. A noticeable lack of plow zone artifacts was apparent in the southernmost portions of the block. The remaining portions of the block to the north displayed a relatively uniform distribution of artifacts. The differences noted in the plow zone distribution of artifacts illustrated that elevated counts in the plow zone were often found in the location of identified features and suggested that a fair degree of spatial integrity remained for some features, despite the plow truncation. The high numbers of artifacts recovered and the clusters observed in the distribution of all artifacts suggested the possibility of identifying more refined spatial data for the block. Artifacts were plotted by type to examine clusters that could represent possible activity areas.

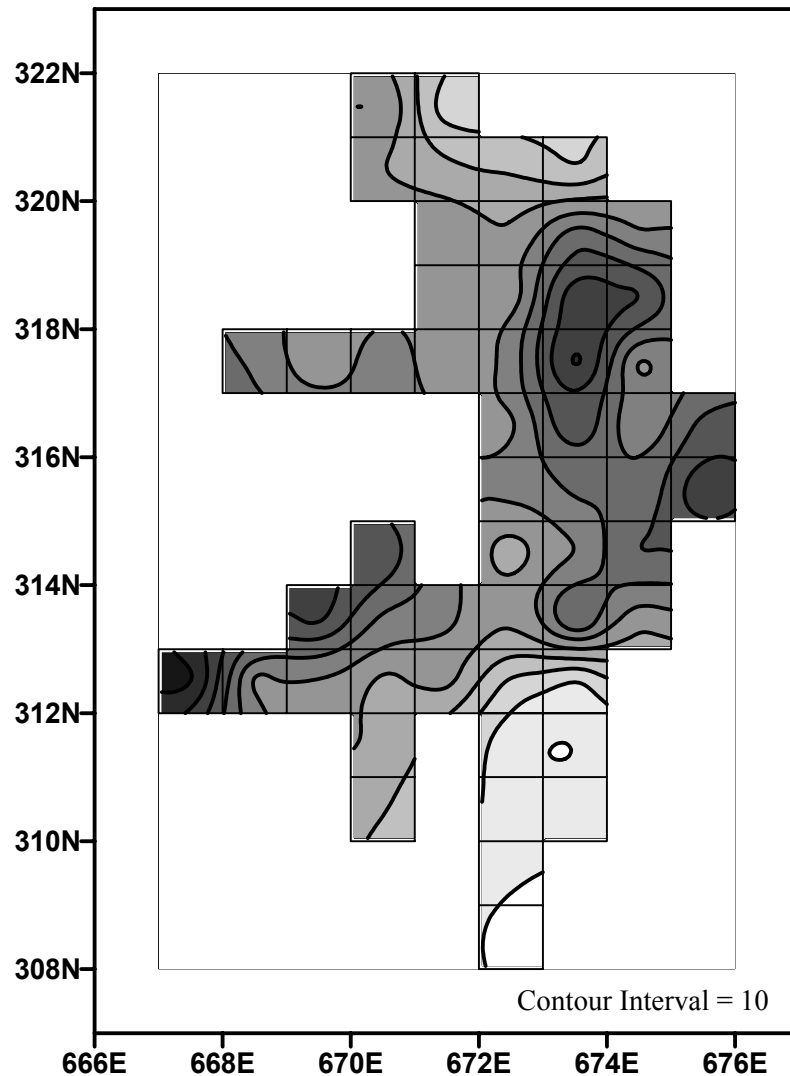


Figure 16.18 Locus A Block 2, Distribution of Prehistoric Artifacts in the Plow Zone

Lithic Distribution

Lithic debitage (flakes and chips) and cores were the first artifact types examined for spatial distribution (Figure 16.19). Plotting identified two significant clusters of debitage in the same location as the clusters noted in the distribution of total artifacts. The densest cluster was located along the eastern edge of the block near Feature 406. The second cluster was located north and west of the first and although not as dense, covered a greater surface area. Interestingly, the rest of the block exhibited much lower debitage counts and only a single minor cluster near Features 408 and 412 in the southwest corner. The lack of debitage was most evident along the southern edges and the northwest corner of the block. This recognizable lack of debitage suggested a level of activity area separation and spatial patterning within the block.

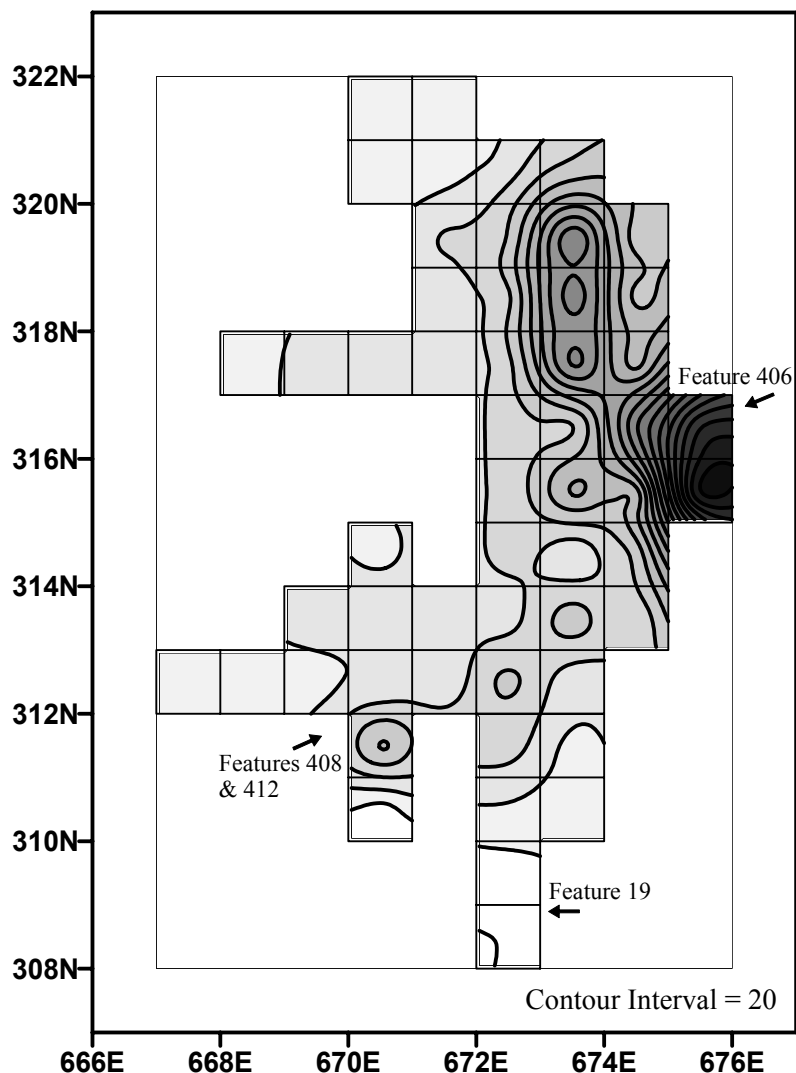


Figure 16.19 Locus A Block 2, Distribution of All Lithic Debitage

The plot of all lithic debitage within Locus A Block 2 identified a significant cluster along the eastern edge of the block. When these units were more closely examined it was apparent that the cluster was comprised primarily of jasper debitage (Figure 16.20). The cluster of jasper lithics coincided with that of total lithics, which suggested jasper was the dominant material type within the block. The densest concentration of jasper lithics was contained in N316-317 E676 with 209 and 255 artifacts, respectively, while most of the block contained between 0-40 artifacts. Although jasper debitage was abundant across the site, the significantly elevated artifact counts for these two units suggested a discrete spatial anomaly. Also located in and around the lithic cluster were five jasper projectile points: one Fox Creek (71-6-J); two Teardrops (72-2-A and 96-2-A); two untyped (67-2-A and 103-1-A). The Fox Creek and one of the Teardrop points were found within the concentration, while the other points had more separation. Another untyped chert projectile point (71-9-A) and a quartzite pitted stone (72-9-A) were the only other lithic tools found within the jasper lithic cluster. The only hammerstones recovered within the block were found further to the southwest and northwest, well outside the horizontal limits of the concentration.

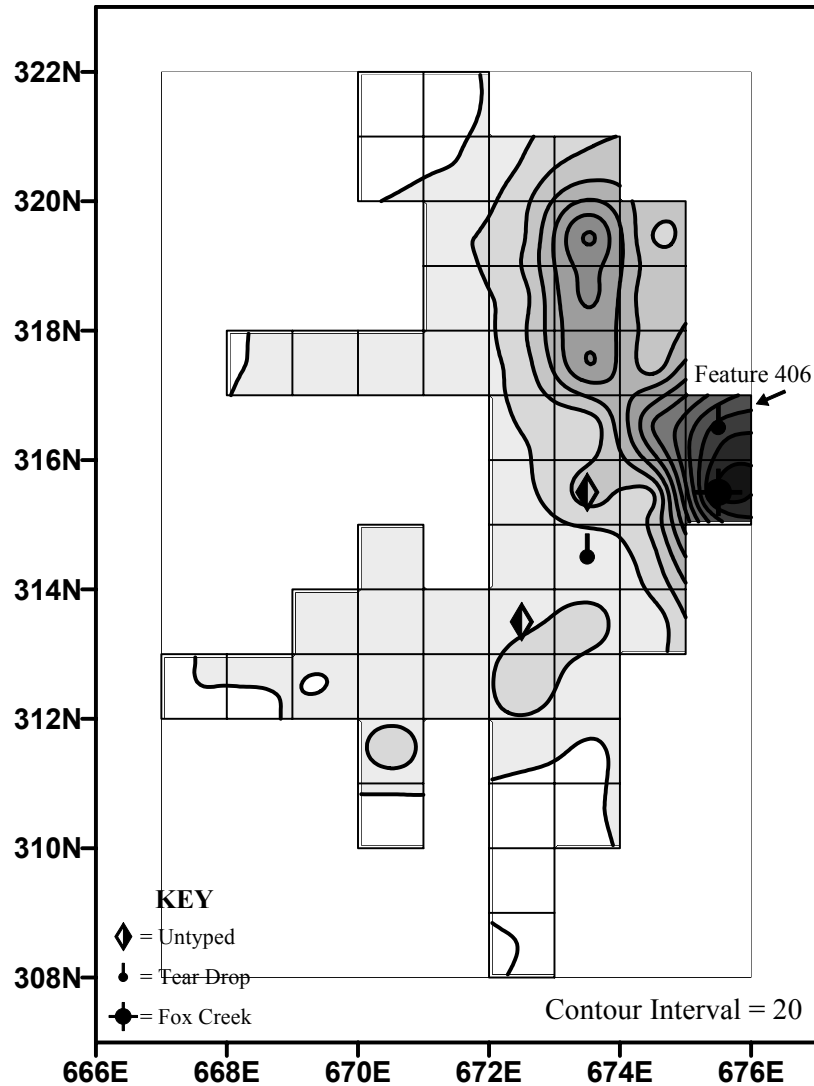


Figure 16.20 Locus A Block 2, Distribution of Jasper Debitage and Location of Jasper Projectile Points

Ninety percent of the jasper lithics were 2 centimeters (cm) or smaller in size and only eight artifacts were greater than 3 cm in size (Table 16.3). For the site jasper assemblage, 24 percent of the debitage was in size grade 1, compared to 53 percent in Locus A Block 2. The 37 percent for size grade 2 was lower than the site jasper debitage average of 61 percent, which further reflects the unusually high incidence of size grade 1. Likewise, the size grade 3 percentage of 8, was slightly lower than the site assemblage of 12 percent. These numbers suggested that this location likely served as a tool maintenance or finishing area due to the small sizes of the debitage. Additionally, only five jasper cores were present within the cluster, further supporting the interpretation of a tool finishing location as opposed to a primary reduction area.

Table 16.3 Debitage Size Grade Breakdown of the Jasper Cluster in N316-317 E676

Size grade	Total count	Percent
1	244	53
2	169	37
3	38	8
4	7	2
5	1	<1
TOTAL	459	100

The cluster in Locus A Block 2 was one of only a few raw material clusters identified at the site. It was also located within an area of several overlapping large basin features and biotic disturbances. Most notably, the heaviest concentration of artifacts was found in N316-317 E676, which also contained the edge of Feature 406, a large basin. The relatively uniform and small size grade of the artifacts did not suggest secondary deposition as refuse, as smaller artifacts are more likely to maintain horizontal spatial integrity from either cultural or natural agents (Stevenson 1991). Larger fragments may have been removed for reuse or further reduction. However, this cluster likely represented an area of tool maintenance and finishing and has maintained a fair amount of spatial integrity. There was also an association of finished tools of the same material with the cluster.

TAS Distribution

Plotting the distribution of TAS artifacts produced recognizable spatial clustering (Figure 16.21). The densest cluster was identified in the southwestern corner of the block, in the location identified from the distribution plot of all artifacts. Another, less dense, cluster was located just north of the first, in an area that had not shown any significant clustering in any of the other plots for the block. A minor cluster was identified within the central part of the block, southwest of Feature 417. A final cluster of TAS was identified near the northwest corner of the block. This cluster was similar in density to the cluster to the east, and both were of much lower density than the clusters to the south. Interestingly, none of the clusters identified in this plot occurred in the location of Feature 417, the single evident TAS feature identified in the block. This suggested that the clusters were either highly dispersed or represented secondary deposition. A noticeable lack of TAS was identified at the southernmost edge of the block, which was an area that showed a general lack of artifacts. The eastern edge of the block also displayed lower frequencies of TAS, corresponding to the location of the dense cluster of lithicdebitage, and further illustrated the separation of activities as evidenced by artifact type.

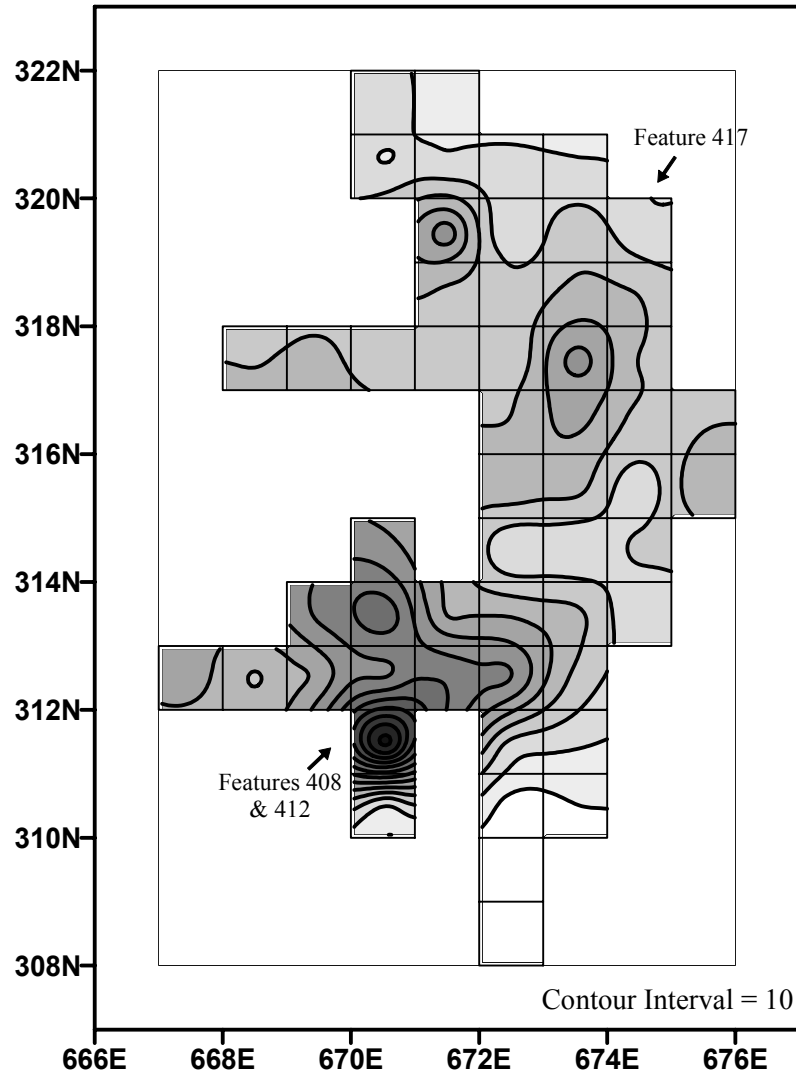


Figure 16.21 Locus A Block 2, Distribution of TAS

Ceramic Distribution

The plot of ceramics within Locus A Block 2 also resulted in noticeable spatial patterning (Figure 16.22). One large, dense cluster of ceramics was identified in the southwest corner of the main portion of the block. It was the most distinct and dense of the clusters and was located in the vicinity of Feature 415, an evident ceramic cluster. This large ceramic cluster was located in the same area as the dense concentration of TAS. Two smaller, less dense clusters of ceramics were identified within the northwestern wing, just to the north. A lack of ceramics was evident along the southernmost edges of the block and along the eastern edge of the central portion of the block. The absence of ceramics occurred in the area between the two dense clusters of lithic debitage (Figure 16.19). The northern portions of the block also displayed a similar low frequency of ceramics. The patterning evident in the ceramic plots compared to the other artifact types plotted suggested differential use of the location and possible segregation of specific activities.

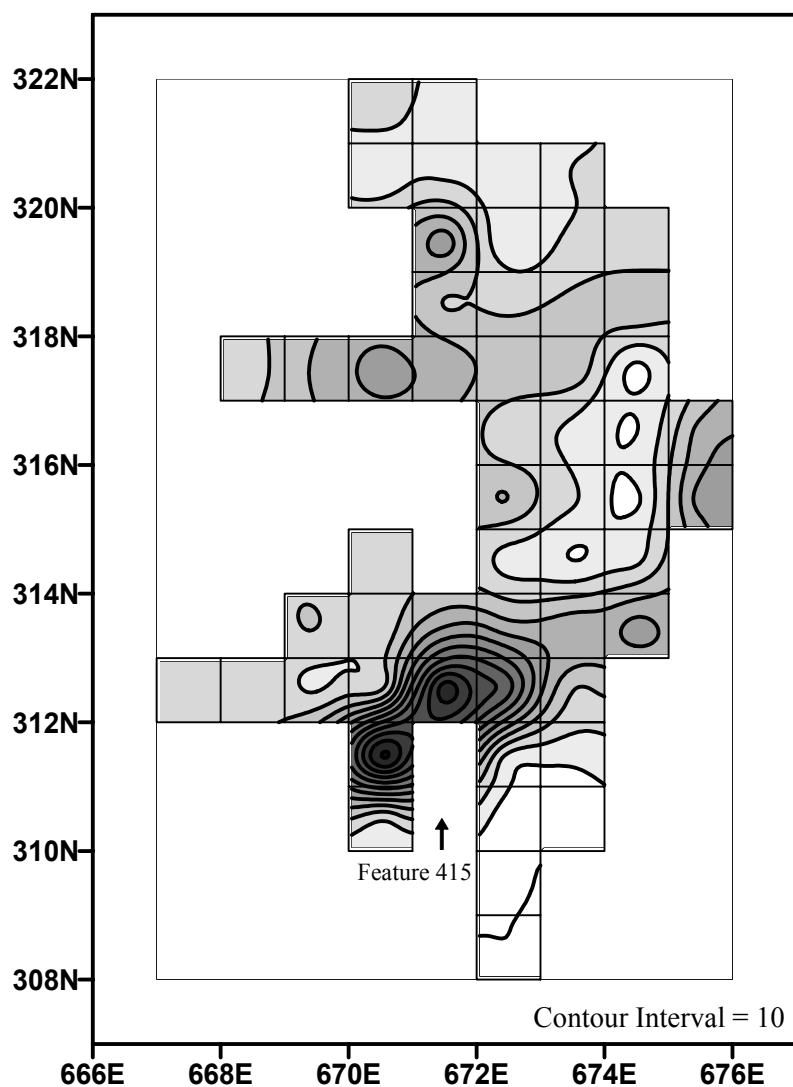


Figure 16.22 Locus A Block 2, Distribution of All Ceramics

The plot of prehistoric ceramics in Locus A Block 2 identified one large and two smaller ceramic clusters. Database queries revealed that Marcey Creek and Clay Tempered wares were the most frequent types identified within the block. As a result, their locations within the block were plotted to examine any patterning that might exist.

Plotting of Marcey Creek ceramics revealed three distinct clusters within the block (Figure 16.23a). The largest and most dense cluster was observed in the northwest corner of the block, in the area that corresponded to the smaller clusters identified in the plot of all ceramics. The next cluster was located along the eastern edge of the block in an area identified as having a lower frequency of ceramics in the total distribution plot. The final cluster was found in the southwest corner of the block partially overlapping the dense cluster noted for all ceramics.

The total counts for Clay Tempered ceramics were much greater than for Marcey Creek ceramics mostly due to the ceramic cluster (Feature 415), which consisted of large portions of two Clay Tempered vessels (Lots HCC4 and HCN2). The location of this feature

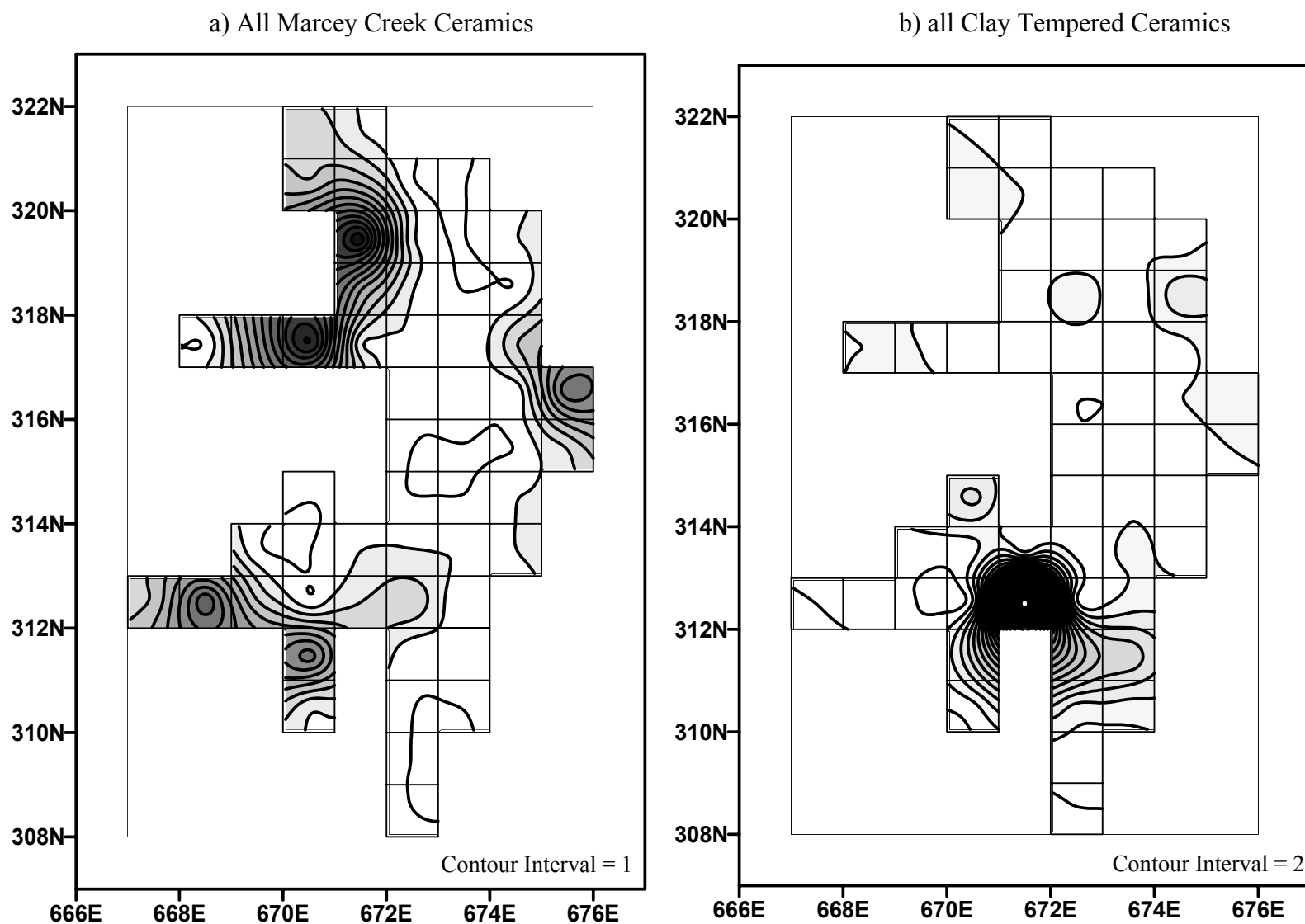


Figure 16.23 Locus A Block 2, Distribution of Early Woodland Ceramics

corresponded to the most dense cluster identified in the computer plot for Clay Tempered ceramics, and was observed near the southern portion of the central block (Figure 16.23b). Two more ephemeral clusters were identified along the western portion and the eastern edge of the block. The areas between these clusters showed a noticeable lack of Clay Tempered ceramics, which suggested that the clusters maintained a degree of spatial integrity.

Comparison of the distribution plots for Marcey Creek and Clay Tempered ceramics revealed that the two wares showed definite clustering and maintained some degree of separation from each other. Although the two wares were often found in the same test units, their clustering was slightly different. The southwestern Marcey Creek cluster was adjacent to and slightly commingled with the dense cluster of Clay Tempered ceramics, but was shifted slightly more to the west. In the area of the large Clay Tempered cluster, Marcey Creek showed a lower frequency. The northwestern Marcey Cluster was also located in the area of the more ephemeral Clay Tempered cluster, but was found with greater frequency in this area. Both wares also evidenced clustering along the eastern edge of the block, although again, the Marcey Creek ware was found with more frequency in this area. The relative separation of the ceramic clusters was important and suggested the possibility of isolating areas of the block and other associated artifacts to specific time periods, which may illustrate patterns of site use.

Vessel Lot HCC4 comprised 34 ceramic sherds, most of which cross-mended directly. The location of this single vessel lot corresponded to the center of the densest concentration of Clay Tempered ceramics identified for Locus A Block 2, in the southern end of the block (Figure 16.24). Vessel Lot HCC4 was contained entirely within one test unit and the pieces that comprised it were found in a single stacked pile, identified as Feature 415. In addition, another Clay Tempered Vessel Lot HCN2 was recovered from this same location. It comprised five sherds that cross-mended. Together, these two ceramic lots comprised the majority of the Clay Tempered ceramic cluster identified for the block. Their singular location and high percentage of cross-mends suggested a high level of integrity for the lots and suggested that they were deposited at the same time. The level of integrity for this ceramic cluster was important given its location within the spatial bounds of several overlapping large basin features including Features 408 and 412. This map was another example that demonstrated how one or two vessel lots could result in a dense cluster obtained from a distribution based solely on type. It also suggested that the level of overprinting between Marcey Creek and Clay Tempered ceramics was less than suggested by comparisons of just the distributions of the two types.

Vessel Lot HT1 was recovered entirely from seven units located within the northeastern portion of Locus A Block 2 (Figure 16.25). The lot comprised 15 total sherds. When overlaid on the distribution of all Townsend ceramics, which had low counts relative to other ceramic types from the block, it was evident that Vessel Lot HT1 accounted for most of the cluster.

Only four sherds identified as Townsend from this block were not a part of Vessel Lot HT1. The isolated and most dense part of the cluster was located in Unit N318 E672, which contained six sherds of Vessel Lot HT1. Despite the overall low artifact counts of Townsend ceramics within the block, their distribution was important given the general lack of Late Woodland artifacts at the site. The discrete location of Vessel Lot HT1 and its correspondence to the distribution of all the sherds of that type was essential for assessing patterns of site use

through time. The location of the Townsend ceramic cluster also slightly overlapped the location of an ephemeral Clay Tempered ceramic cluster in this part of the block, but maintained a degree of horizontal separation from the main clusters of Marcey Creek ceramics, suggesting the possible differential use of the space by different occupations at the site.

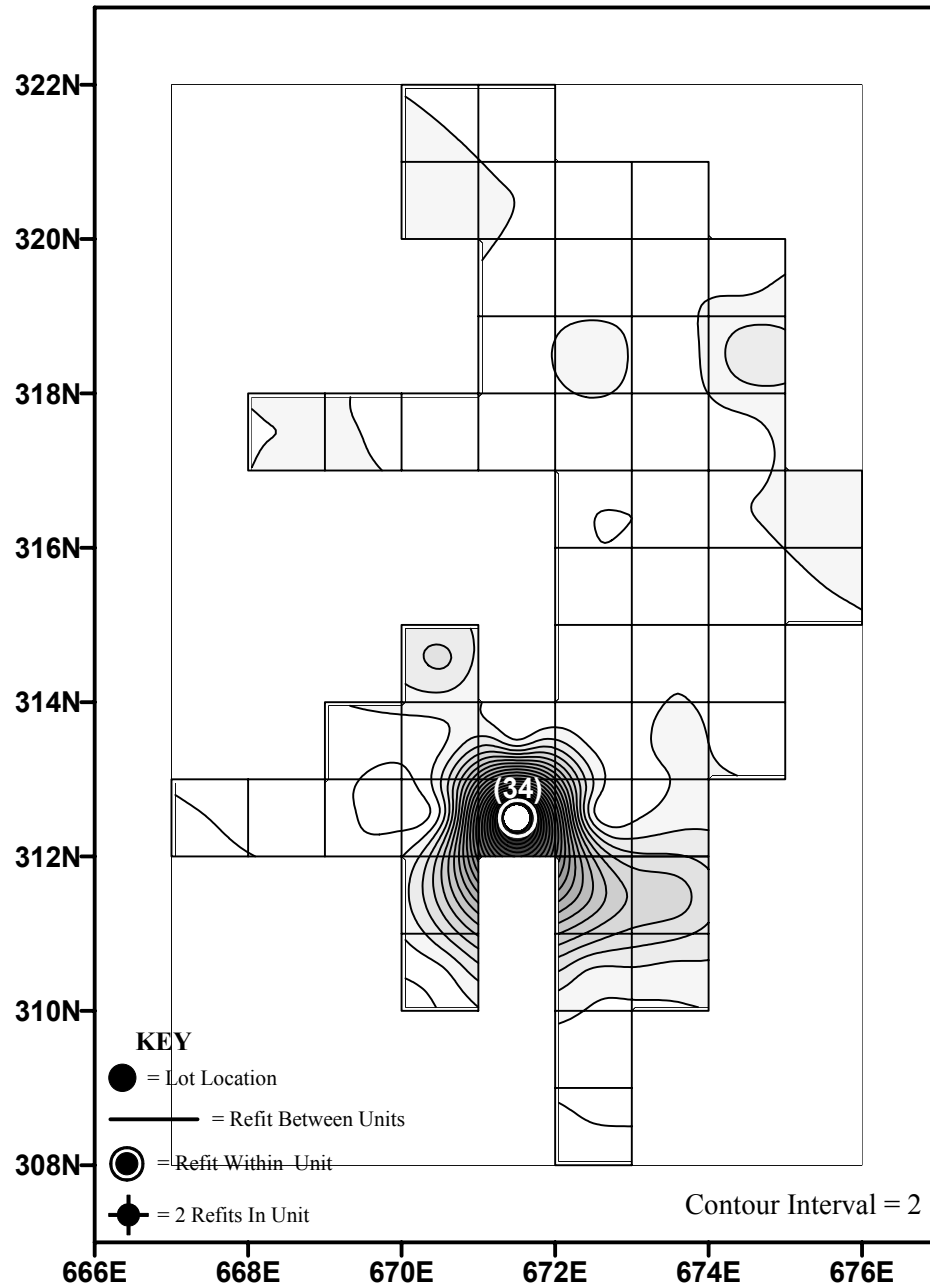
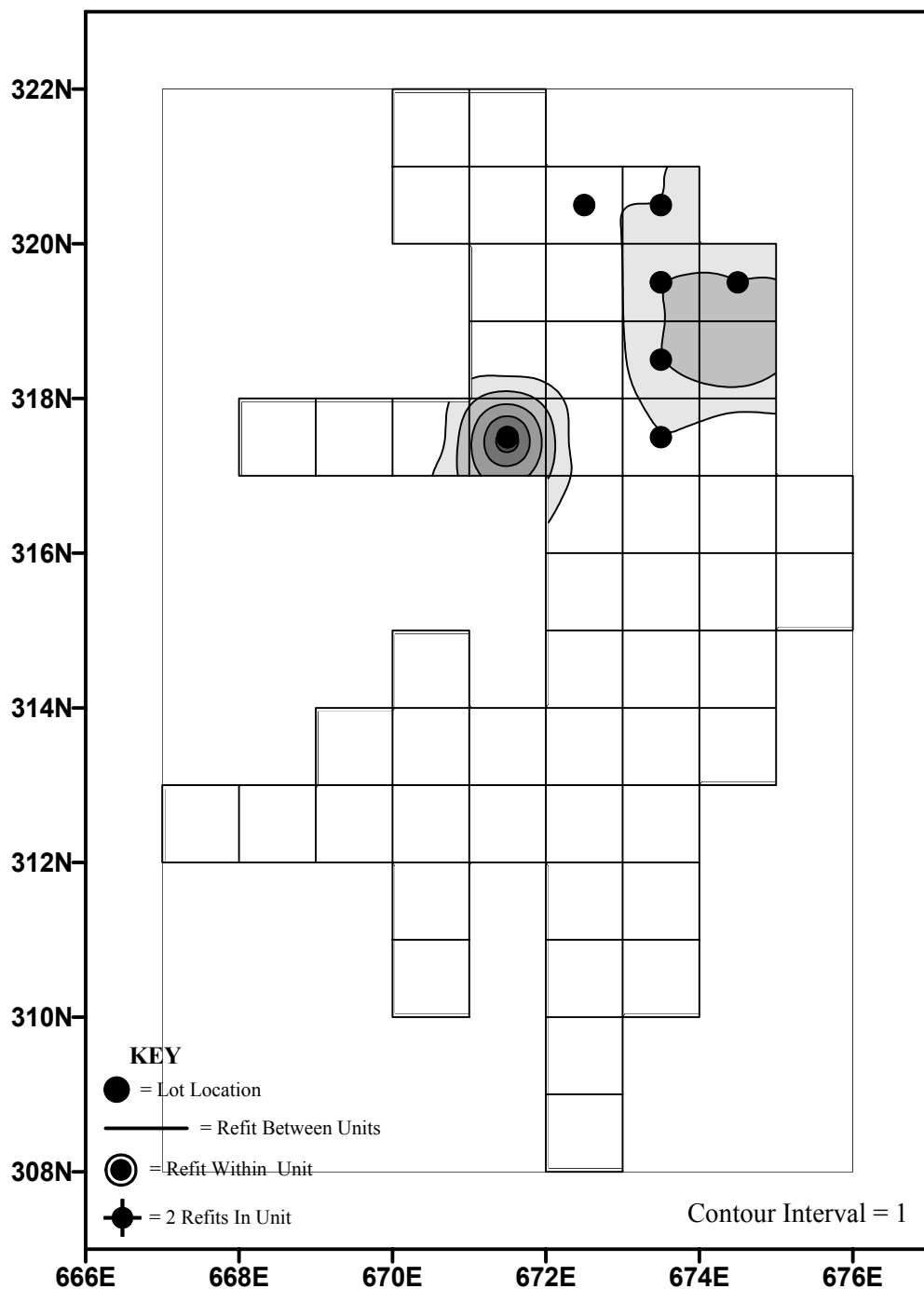


Figure 16.24 Locus A Block 2, Location of Vessel Lot HCC4, Overlaid on Distribution of All Clay Tempered Ceramics. (Lot contained wholly within single unit.)



**Figure 16.25 Locus A Block 2, Location of Vessel Lot HT1,
Overlaid on Distribution of All Townsend Ceramics**

Chronological Distribution

In an effort to more fully refine the relative chronology within the block, a plot of diagnostic projectile points was overlaid on the ceramic distribution plots for Marcey Creek and Clay Tempered wares (Figure 16.26a-b). However, the projectile point overlay did not elucidate

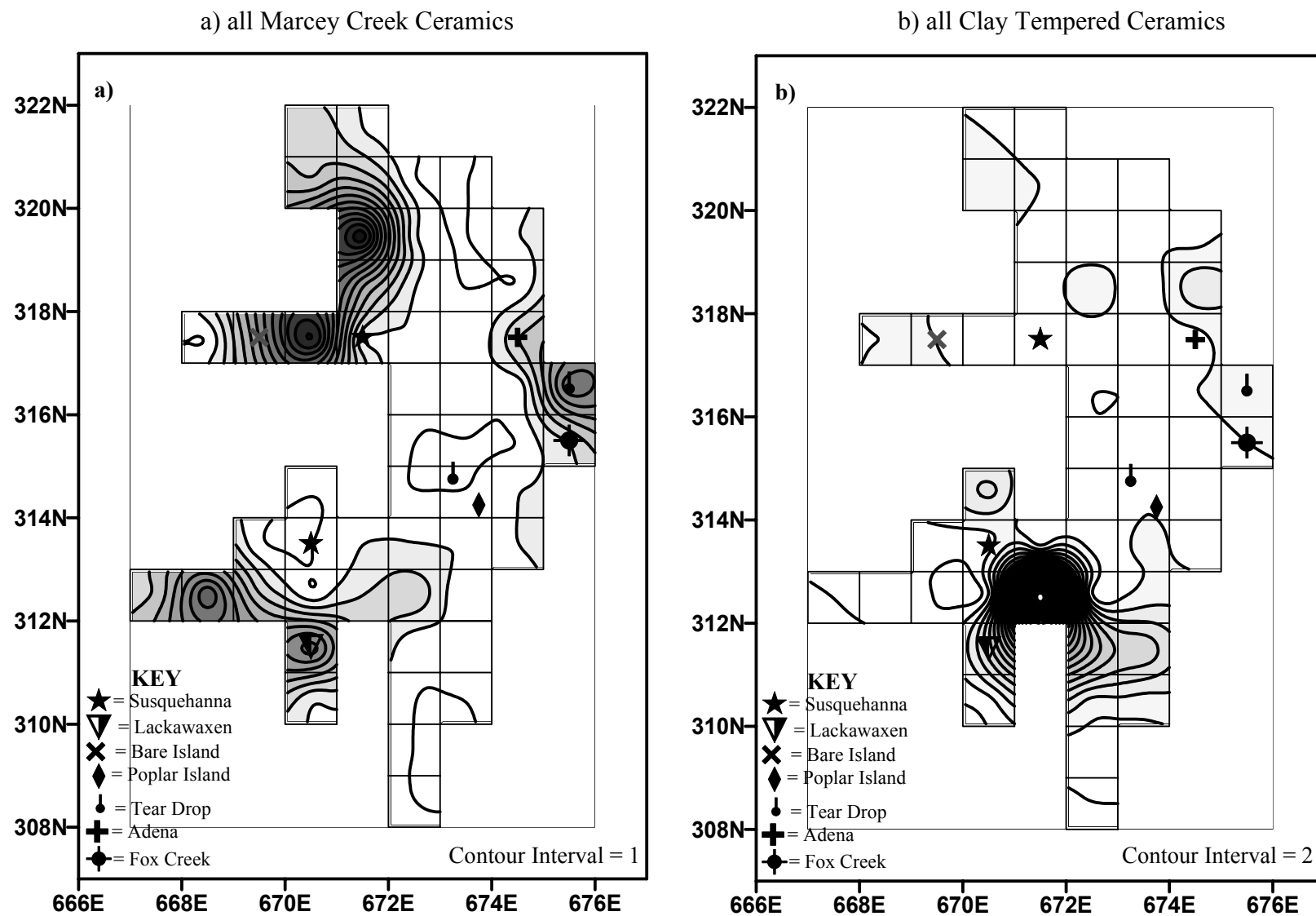


Figure 16.26 Locus A Block 2, Showing Overlay of Diagnostic Projectile Points and Selected Ceramics

the patterns more clearly. Fourteen projectile points were recovered from Locus A Block 2, of which only nine were diagnostic (Table 16.4). Of these, five were typically associated with the Late Archaic period and not with ceramic wares. Two more had associations that ranged from the Late Archaic to the Middle Woodland period, one other Middle Woodland point, and the remaining point was associated with the Early Woodland period.

Table 16.4 Summary of Diagnostic Projectile Points from Locus A Block 2

Catalog number	Typology	Chronology
68-1-A	Adena	Early Woodland
71-6-J	Fox Creek	Middle Woodland
72-2-A	Teardrop	Late Archaic-Middle Woodland
96-2-A	Teardrop	Late Archaic-Middle Woodland
96-3-A	Poplar Island	Late Archaic
112-2-C	Susquehanna	Late Archaic
118-100-B	Susquehanna	Late Archaic
121-2-A	Bare Island	Late Archaic
124-115-A	Lackawaxen	Late Archaic

Some interesting patterns did emerge from the projectile point overlay of the ceramic distributions. For two of the three Marcey Creek clusters, the points associated were Late Archaic. The northernmost Marcey Creek cluster contained both a Bare Island and a Susquehanna point. Susquehanna points are also viewed as Transitional in nature and have been found at sites in association with steatite vessels and early ceramics (Witthoft 1953; Ritchie 1965). The southern Marcey Creek cluster also had a Susquehanna point just to the north of cluster and a Lackawaxen point within the cluster. The final Marcey Creek cluster, located along the eastern edge of the block, contained the Adena and Fox Creek points, which are not typically associated with Marcey Creek ceramics and further demonstrated that this cluster exhibited temporal overlap.

The points found along the eastern edge of the block had a better correlation with the smaller cluster of Clay Tempered ceramics found there. The Fox Creek point, typically a Middle Woodland point, was probably too late to be associated with these ceramics, but the Adena point was a better match. In fact, the association of Clay Tempered ceramics and Adena artifacts has been noted in the past (Custer 1989). The Teardrop point found within the Clay Tempered ceramic cluster was also less problematic, as its association spanned the Late Archaic through the Middle Woodland periods. Although the point and ceramic associations were not clear, they provided some interesting insight into the level of overprinting that needs to be considered within the spatial data. In addition, this overprinting was not altogether unexpected for Locus A Block 2 given the presence of several large and overlapping basin features. The ceramic data illustrated that a level of horizontal spatial integrity has been maintained despite the intensity of use in this location.

Summary

Locus A Block 2 yielded a variety of important spatial data. Two large concentrations of lithic debitage were identified and assessed. One contained a significant amount of jasper and the other contained jasper tools. One dense and three secondary clusters of TAS were identified in the block, and their location did not correlate to the single evident TAS feature identified in Locus A Block 2. Furthermore, three overall ceramic clusters were identified. When examined by type, ceramics displayed a high degree of horizontal separation between Marcey Creek and Clay Tempered wares. The chronological indicators were not as clear when diagnostic projectile points were overlaid on the ceramic distributions, but were nonetheless significant. Data from ceramic cross-mends helped to illustrate the integrity of the ceramic clusters.

Comparison of the distributions of artifacts by type also produced significant patterns. Lithic debitage was heavily concentrated on the east side of the block, while TAS and ceramics were more prevalent to the southwest and along a portion of the northwest side of the block. The patterns of artifacts were also significant, given the number and overlap of large basin features within the block, and may help to identify feature function or possible temporal affiliation. These distributions also suggested the differential use of space segregated by activity.

Locus A Blocks 1 and 2

Locus A Blocks 1 and 2 were separated by less than 5 m and, as a result, contained some complementary site information and patterning. Vessel Lot MA03 consisted of 36 total sherds that, with the exception of one sherd, were found within Block 1. Refit groups were identified within four units, including one unit that had two refit groups. No cross-mends were identified for sherds between units. When overlaid on the total distribution of Marcey Creek ceramics from the two blocks, some interesting patterns resulted. Within Block 1, the locations of Vessel Lot MA03 corresponded to the clusters in the Marcey Creek ceramic plots. The relatively high number of sherds within the lot suggested that it accounted for a high proportion of the identified cluster (Figure 16.27). The sherds of Vessel Lot MA03, found in the easternmost portion of Block 1, also corresponded to a small increase of frequency for Marcey Creek ceramics. The location of the MA03 sherd in Block 2, on the other hand, did not correspond to any cluster of Marcey Creek ceramics, but was recovered from an area of low frequency, even when the contour interval was considered at two artifacts, instead of five artifacts (Figure 16.27). The majority of the lot maintained a high degree of spatial integrity (located in 10 contiguous units). The horizontal separation (8 m) of the sherd in Block 2 from the nearest part of the lot, over 13 m from the main cluster of Lot MA03, suggested a moderate degree of dispersion for the vessel. The dispersion of the vessel could be the result of several cultural activities such as reuse of older vessels for new purposes, site cleaning, or simply trampling of sherds across the former occupation surface.

The distribution of Clay Tempered ceramics within Locus A was variable. In Block 1, the overall counts for Clay Tempered ceramics were low in relation to the rest of the site and only showed some minor clustering along the eastern portions of the block. In Block 2, the counts were much higher and resulted in a dense cluster and a few light clusters of ceramics. However, the higher counts obtained in Block 2 were related to a single feature comprised of two vessels (Feature 415). The location of other Clay Tempered vessel lots within Locus A exhibited some spatial patterning.

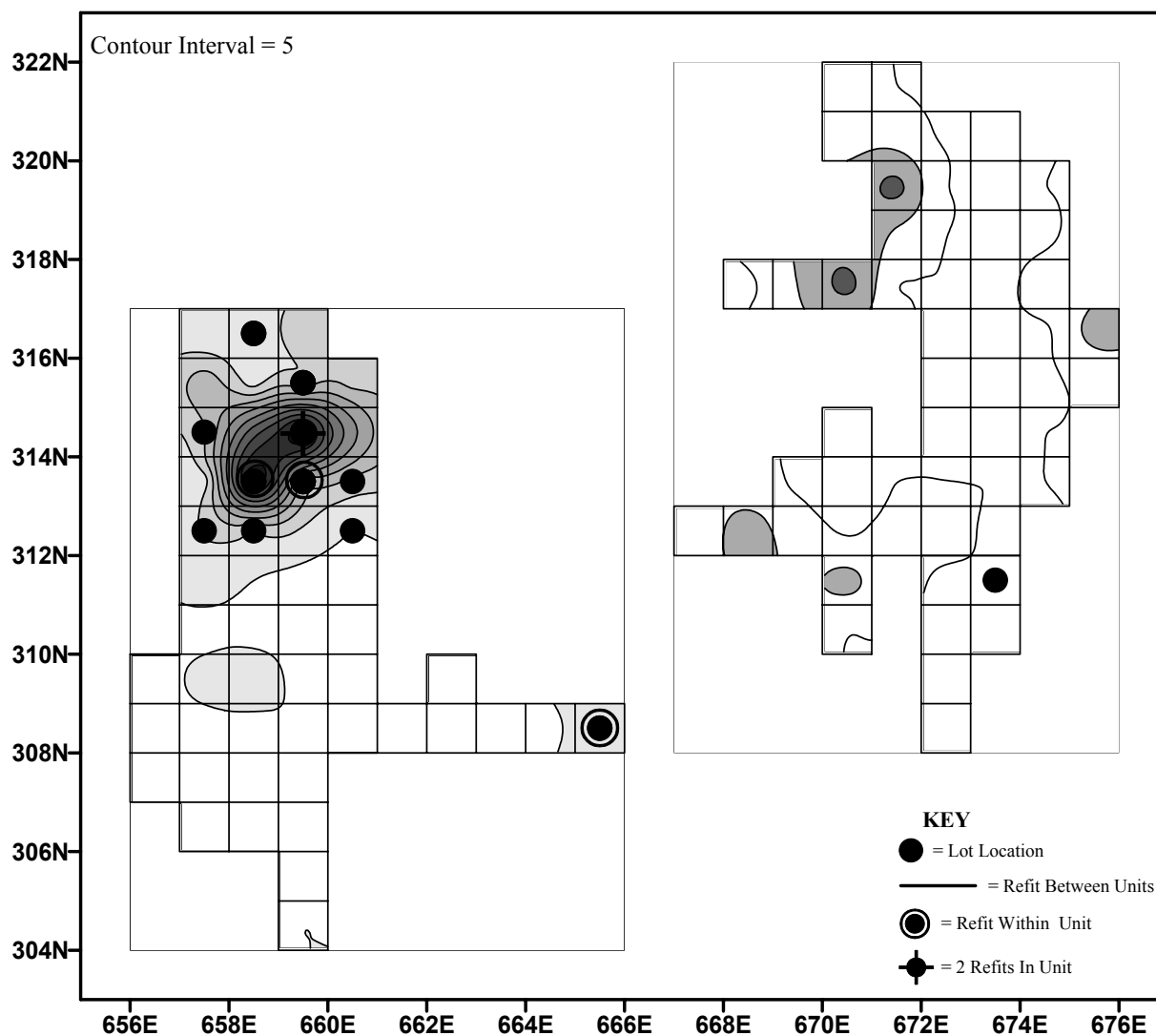


Figure 16.27 Locus A Blocks 1 and 2, Location of Vessel Lot MA03, Overlaid on Distribution of all Marcey Creek Ceramics

Vessel Lot CN16 consisted of eight total sherds, which were found spread across Locus A Blocks 1 and 2 (Figure 16.28). Four of the eight sherds were recovered from four contiguous units, near the center of Block 1, in an area of overall low frequency of Clay Tempered ceramics. Another sherd was recovered from the southernmost portion of Block 1 in another area of low frequency. Two more sherds of Vessel Lot CN16 were located adjacent to the dense cluster noted in Block 2, while the final sherd was located to the north of Block 2 in an area of low frequency for this ware type. No cross-mends were identified for the lot. The low numbers and high degree of horizontal separation evidenced by the lot suggested a fair amount of dispersion and limited spatial integrity. No sherds from this lot were recovered from the main clusters of Clay Tempered ceramics identified in either block (Figure 16.28).

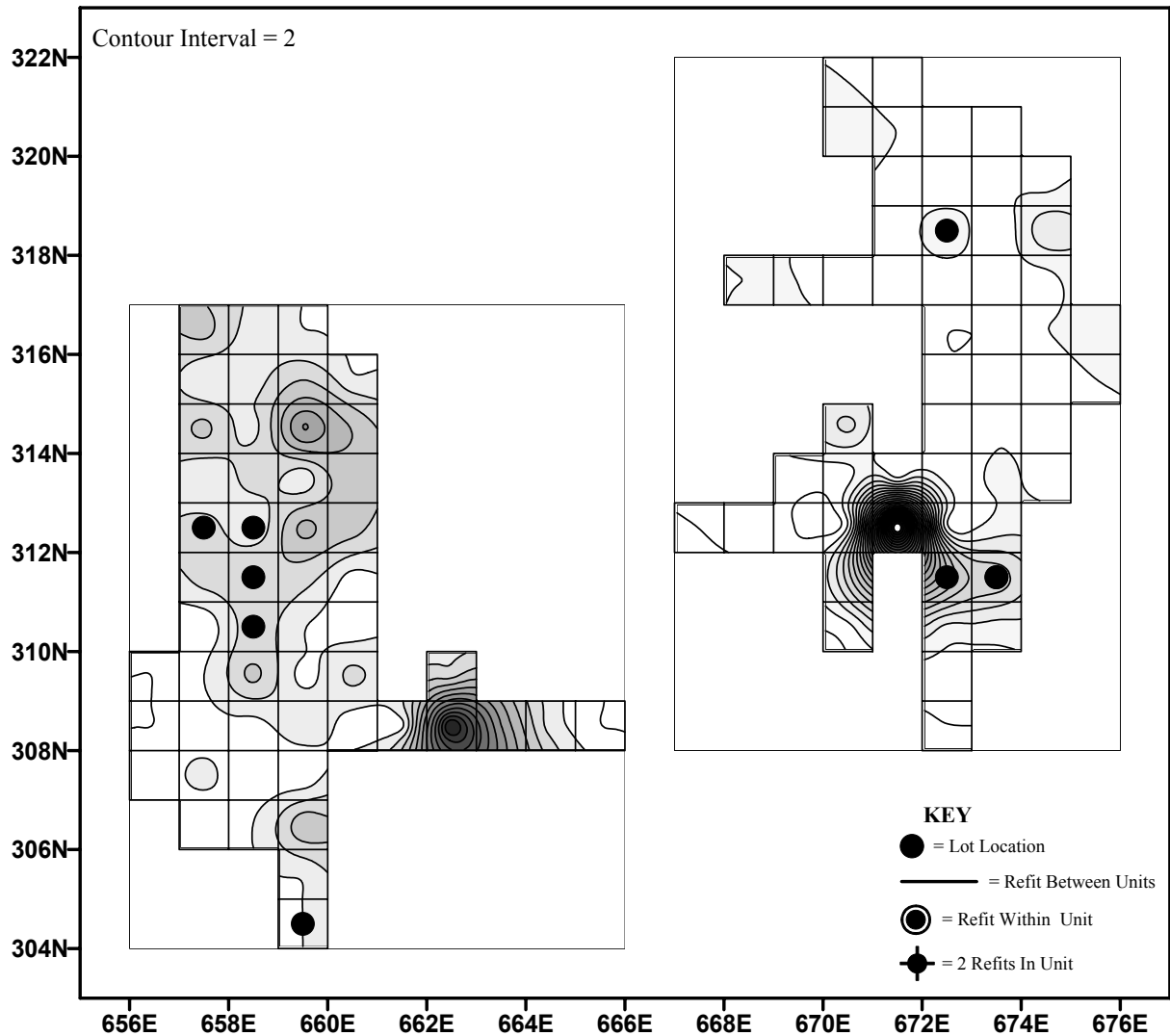


Figure 16.28 Locus A Blocks 1 and 2, Location of Vessel Lot CN16 Overlaid on Distribution of All Clay Tempered Ceramics

Vessel Lot CN17 was also recovered from Blocks 1 and 2 in Locus A. The lot consisted of nine sherds that were recovered from seven noncontiguous units in the two blocks. A single cross-mend was identified for two sherds in a single unit. When the locations of Vessel Lot CN17 were overlaid on the distribution plot of all Clay Tempered ceramics, they remained outside of the main clusters identified (Figure 16.29). Two of the sherds were located adjacent to the ephemeral scatter identified in the northeastern portion of Block 1, while the other four sherds found in Block 1 were located away from the clusters. The three sherds found in Block 2 were all found outside of the dense cluster of Clay Tempered ceramics in areas of moderate to low frequency for that ware.

Although composed of lower counts, comparison of the locations of Vessel Lots CN16 and CN17 were important for several reasons. The locations of both lots over greater horizontal distances demonstrated the general dispersion of the Clay Tempered wares in this part of the site

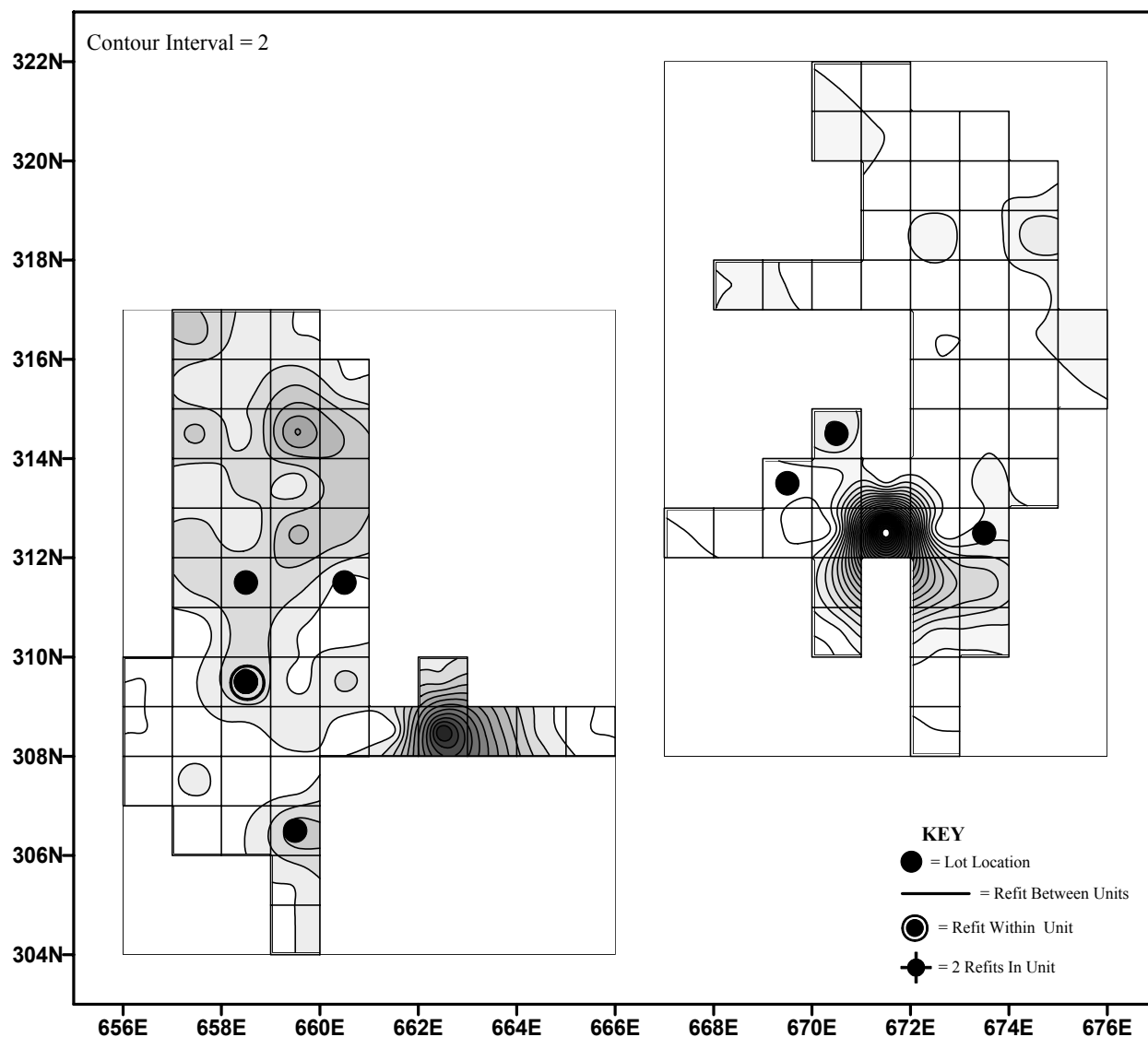


Figure 16.29 Locus A Blocks 1 and 2, Location of Vessel Lot CN17 Overlaid on Distribution of All Clay Tempered Ceramics

and presumably, any artifacts associated with these ceramics. The dispersion of these vessels could be the result of deliberate reuse strategies, whereby the vessel either was continually used after its initial breakage or was intended to be recycled as a tempering agent for a new vessel. The spread of ceramics may have indicated specific site cleaning activities that would have dispersed the broken sherds from where they were deposited. Another interesting point gathered from the correlation of Vessel Lots CN16 and CN17 and the distribution plot of all Clay Tempered ceramics was that, although the overall counts for these wares was lower across Locus A in relation to the rest of the site, at least two separate vessels were identified. Furthermore, when the other Clay Tempered lots in Locus A were considered, the number of vessels increased to 15. This result illustrated how the cluster analysis might suggest that ceramics are fewer from total counts and could be interpreted as less intense occupation. However, when considered from the vessel standpoint, the limited number of sherds could represent more actual vessels and therefore, a greater intensity of occupation. The complementary information gathered from

general ceramic distributions and locations of specific vessel lots is therefore an important step in assessing site occupations, activity areas, and artifact associations before assessing notions of occupation intensity.

Locus B

Locus B was located in the southeast quadrant of the site in a low artifact density zone. Excavations in the block identified 11 features, including: one large basin (Feature 25); one TAS cluster (Feature 62); seven biotic (Features 27, 28, 29, 30, 59, 102, and 126); one geomorphic (Feature 57); and one natural (Feature 125). Distribution of the features within the block showed that the TAS cluster (Feature 62) was located adjacent to large basin Feature 25, less than 1 m from the basin edge (Figure 16.30). The large basin was in turn impacted by several of the biotic disturbances noted in the block. The majority of the block did not contain evident features suggesting a less intensive use of this area.

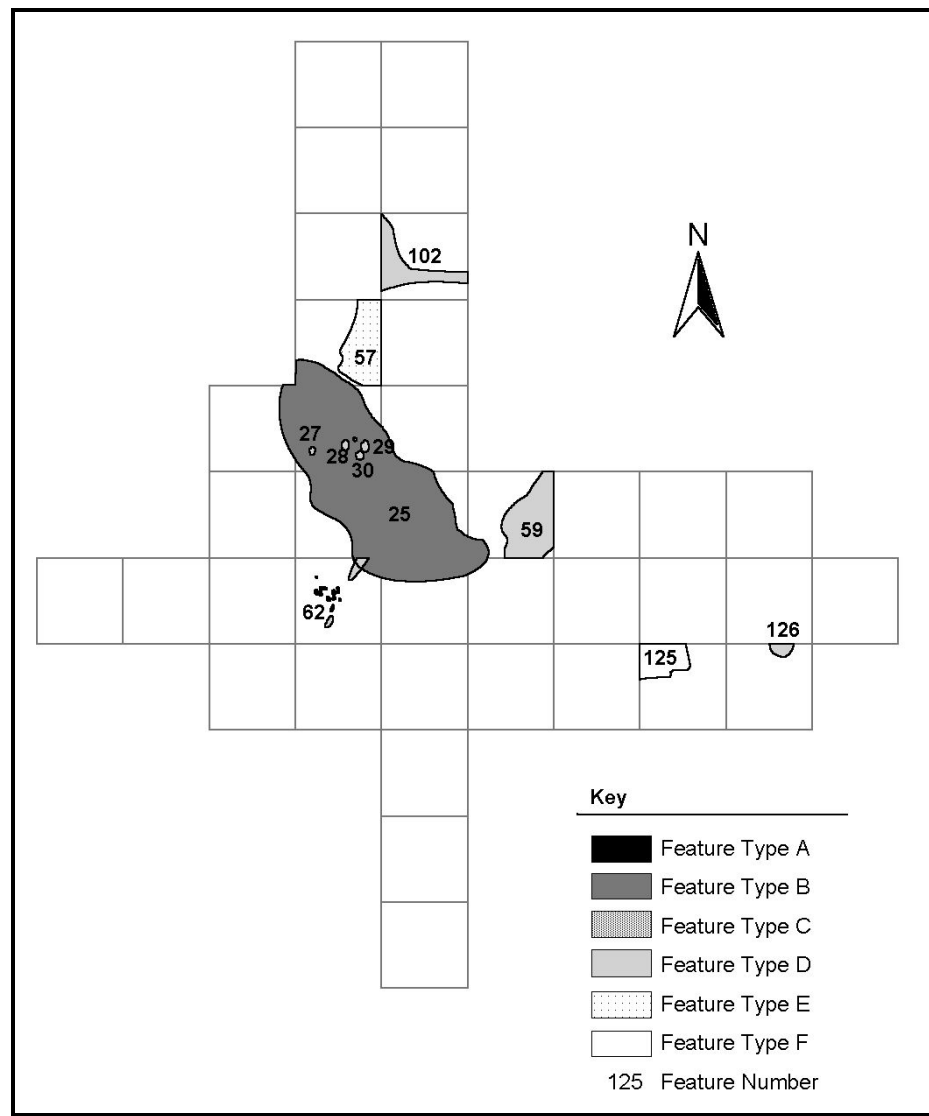


Figure 16.30 Locus B, Feature Locations

Although the overall artifact counts were low within the block, the plot revealed the presence of two distinct clusters and a third more ephemeral cluster (Figure 16.31). The first cluster was located to the north of the block near Feature 102; the second, to the west of the block near Feature 25; and the third, along the southern limits of the block southeast of Feature 62. This latter cluster remained less distinct as a result of the limits of the block excavation.

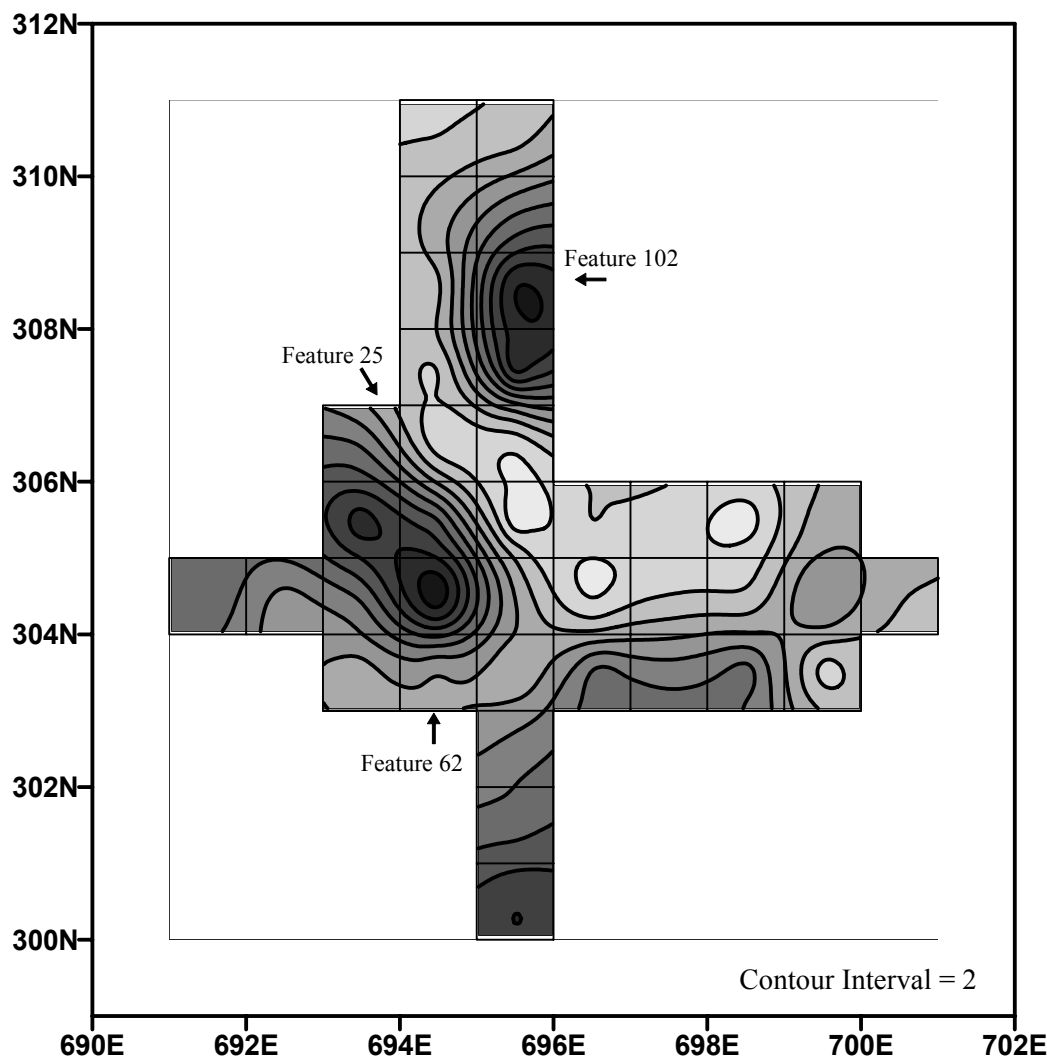


Figure 16.31 Locus B, Distribution of All Prehistoric Artifacts

Investigation of the clusters highlighted some minor distinctions between them. When plotted by artifact type and/or universal stratigraphy, the same clusters were evident, but showed differing intensities. The northern cluster contained greater ceramic counts than the others, however, ceramic counts for Locus B were low in comparison to the rest of the site. The cluster to the west displayed greater counts for lithic debitage. The artifacts in this cluster were recovered from the plow zone with greater frequency than the other clusters. The concentration to the south was less distinct and contained a lower frequency of TAS than the rest of the block. In addition, the center of the southern concentration, as seen in the Ap-horizon, was shifted to the east relative to

the center of the concentration plotted for the E-horizon. Both of these concentrations within the south cluster were evident in the distribution plot of all ceramics (Figure 16.32).

The plot of all ceramics within Locus B closely matched the plot for total artifacts, suggesting that ceramics contributed a significant portion of the artifacts recovered within the block. The ceramic clusters identified with Locus B maintained horizontal separation from each other, which implied a degree of spatial integrity; however, the ceramic counts were low when compared to the rest of the site. The lower number of ceramics in Locus B was considered indicative of less spatial integrity and removal of portions of these vessels from the block. This latter activity was evident in the distributions of sherds from Vessel Lot CN15 (Figure 16.32).

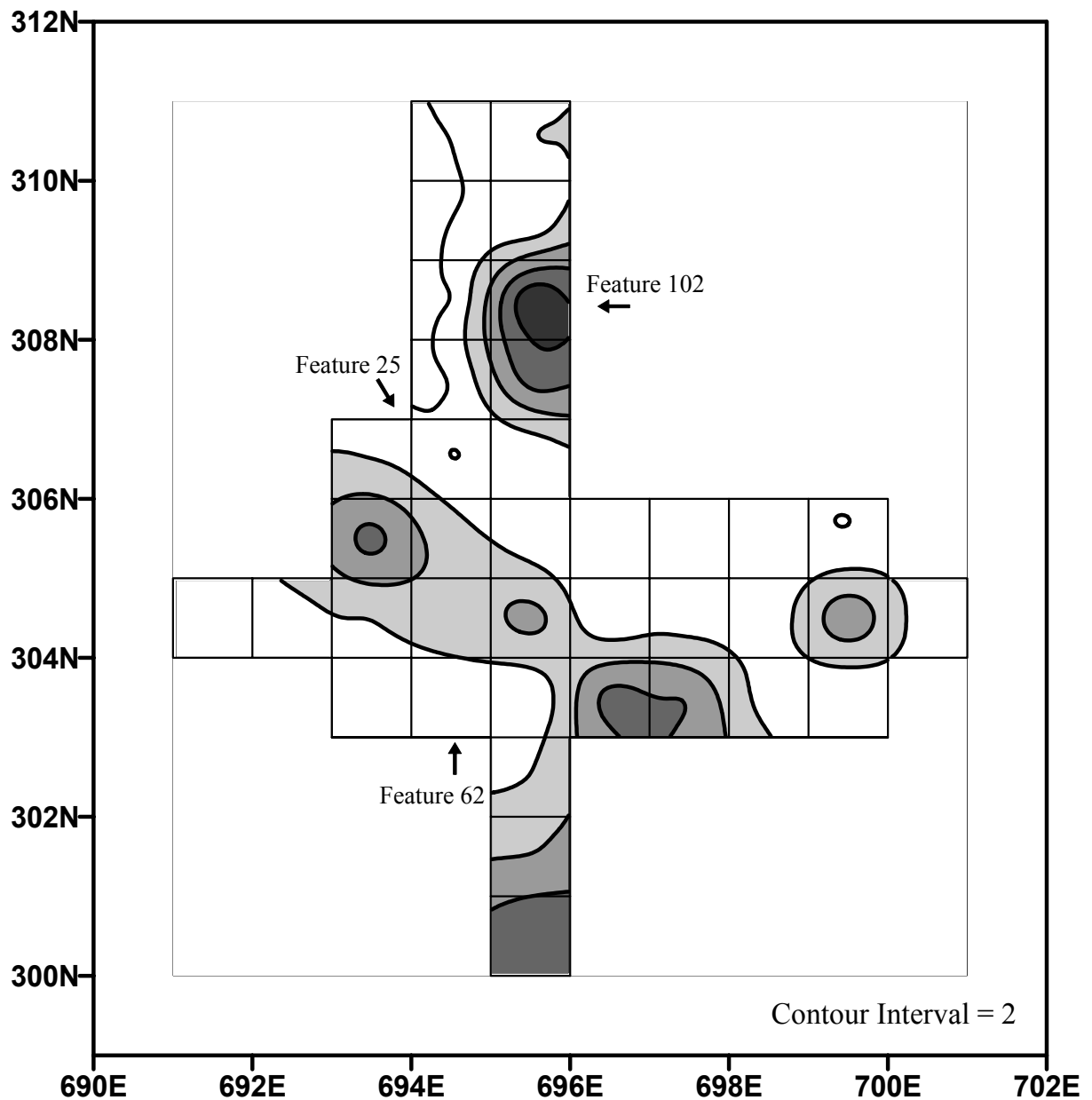
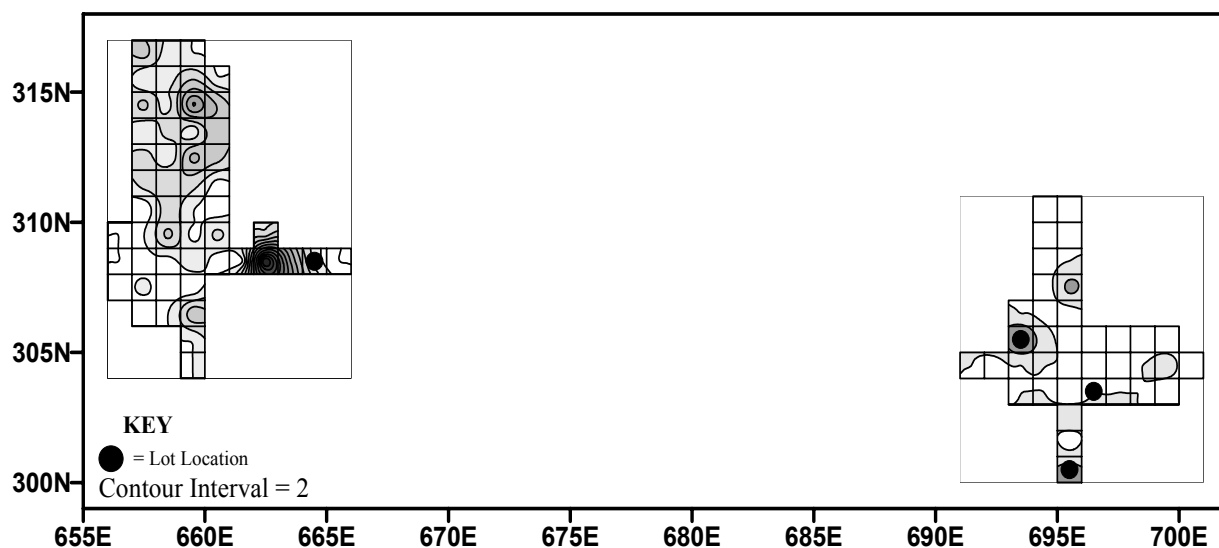


Figure 16.32 Locus B, Distribution of All Ceramics

Locus B contained a lower frequency of ceramics than many of the other blocks at Hickory Bluff, as seen from the distribution of all ceramics in the block. Clay Tempered ceramics accounted for the majority of the ceramics in Locus B. Included in the block was Vessel Lot CN15, which was composed of four sherds, three of which were recovered from Locus B. The fourth sherd was recovered in Locus A Block 1, almost 30 m west of the majority of Vessel Lot CN15. This horizontal separation and the low number of sherds recovered for the lot suggested a high degree of dispersion and lack of spatial integrity for the vessel. When overlaid on the distribution plot of all Clay Tempered ceramics in the two blocks, Vessel Lot CN15 had varying coincidence with the identified clusters (Figure 16.33). In Locus A Block 1, the Vessel Lot CN15 sherd was recovered adjacent to the dense Clay Tempered ceramic cluster identified in the eastern excavation wing. In Locus B, two of the Vessel Lot CN15 sherds were recovered from the small clusters identified in the block. The remaining sherd was located on the periphery adjacent to the southern cluster of ceramics. To assess the possibility that the spatial arrangement of Vessel Lot CN15 was due to plow disturbance, the universal stratum for each sherd was identified. Only one sherd, 1741-2, was recovered from the plow zone. This sherd was located along the west edge of Locus B, and coincided with the cluster of Clay Tempered ceramics in the block. The other two sherds of Vessel Lot CN15 in Locus B were recovered from the E-horizon. The sherd recovered in Locus A Block 1 was recovered from Feature 74, a geomorphic discontinuity in the soil profile. These variations suggested that the vessel had been mostly dispersed previous to plowing. This dispersion may have been the result of specific reuse of the damaged vessel or from site cleaning activities. The recovery of this Vessel Lot CN15 from the two different blocks was important for establishing a relationship between them and the possibility of establishing patterns of site use for different relative time periods.



**Figure 16.33 Locus B and Locus A Block 1, Location of Vessel Lot CN15,
Overlaid on Distribution of All Clay Tempered Ceramics**

The distribution of artifacts in Locus B displayed some spatial patterning. In general, the artifact counts were low, which confirmed the impressions from the shovel test data and early unit excavations. Three general clusters of artifacts were identified within the block, but showed some dispersion from plowing. When plow zone artifacts were removed from the plots, the clusters tended to show greater definition, albeit with low overall counts. The content of the clusters varied only minimally. When compared to feature distributions within the block, the western artifact cluster seemed to be associated with the units that contained Feature 25 (Type B-1a) and Feature 62 (Type A-1a). The northern cluster was in the vicinity of Feature 102 (Type D-3), while the southern cluster was not located near any identified feature. The spatial data from Locus B suggested it represented an area of small activity clusters that remained discrete despite the plow disturbance. The artifact distributions suggested limited intensity of use and only slight variation between the identified artifact clusters. The relative homogeneity and low numbers of the artifacts suggested limited activities occurred in this location.

Locus C Block 1

Locus C Block 1 was located within the southeast quadrant of the site that was considered to represent a low artifact density zone. Seven features were identified and included a large basin (Feature 118); a small basin with biotic disturbance (Feature 116); a combination basin with heavy biotic disturbance (Feature 10); two biotic (Features 104 and 107); and two geomorphic features (Features 103 and 108). Features 116 and 118 were located in close proximity to each other, less than 1 m apart (Figure 16.34). Feature 10 was also close, located 1 m further west of Feature 116. Natural Features 104 and 108 were adjacent to each other, but likely not associated. The proximity of the two large and one small basins at the eastern side of the block was important, as it illustrated that the basins were discrete, which might be indicative of patterned use of the land.

The artifact plot revealed an obvious concentration of artifacts in the northeast part of the block (Figure 16.35). This cluster centered on Feature 118, a large basin feature, and represented artifacts recovered from within the feature matrix and the plow zone above the feature. The clustering of artifacts in the plow zone above the feature indicates that the upper portion of the feature was truncated by the plow zone. The majority of the units in the block contained between 0 and 5 artifacts, while the units that contained Feature 118 had counts that reached upwards of 60 artifacts. Interestingly, the majority of artifacts were untyped ceramics. Of the 126 artifacts found within the seven units that comprised the cluster (N301-303 E733-734 and N302 E735), only five pieces of TAS were recovered; the remaining 121 artifacts were ceramics. Within the ceramic subassemblage for the block, three sherds were identified as Wolfe Neck, one sherd as Clay Tempered, and the remainder as untyped.

Lithic artifacts, both debitage and TAS, were found in low frequencies. No single unit contained more than three lithic artifacts. A single tool was recovered in the block, a jasper triangle point (306-1). Of the 22 lithic artifacts recovered within Locus C Block 1, 14 were found in the plow zone. The E-horizon contained six lithic artifacts, Feature 118 two, and Feature 10, one.

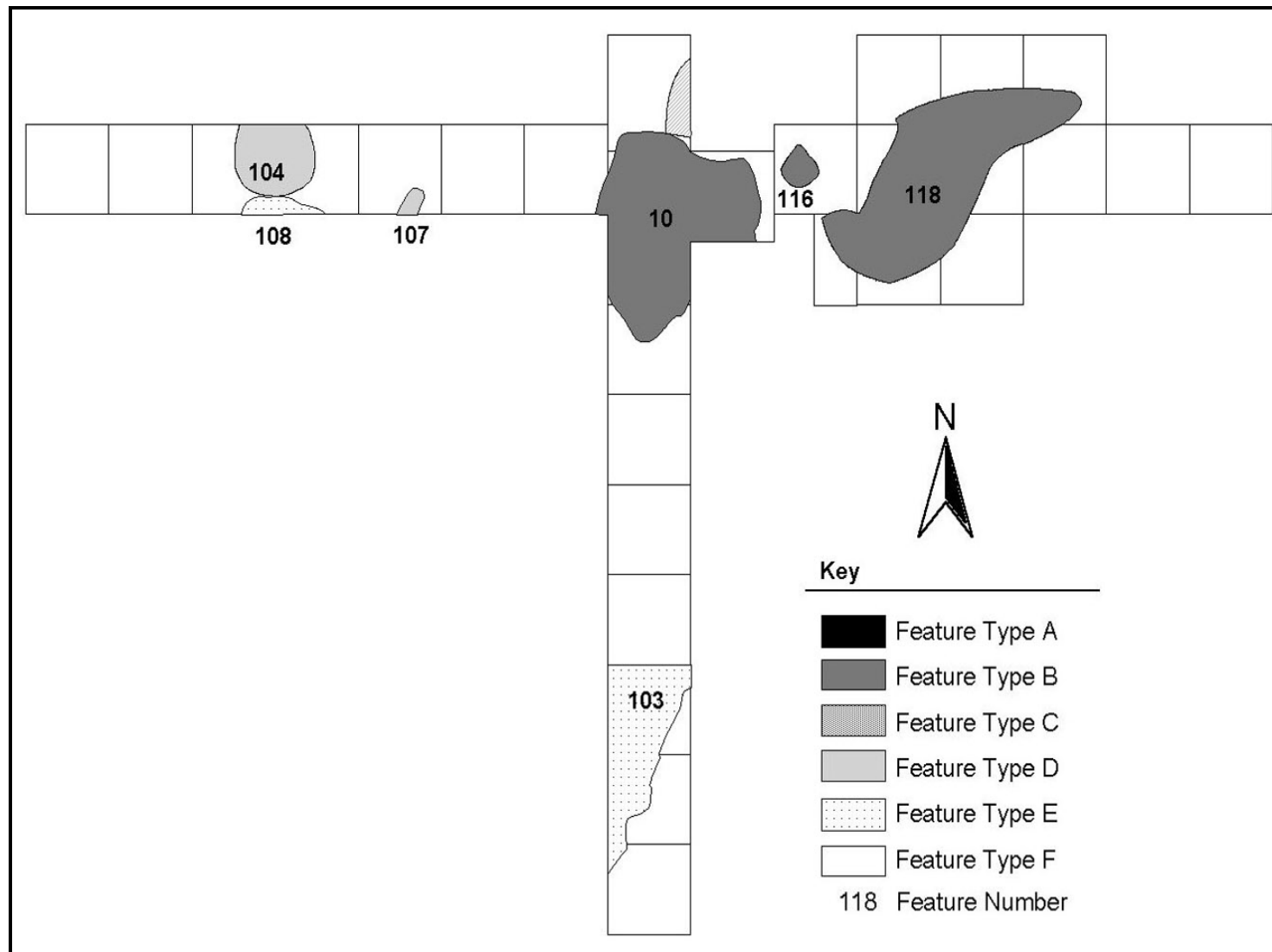


Figure 16.34 Locus C Block 1, Feature Locations

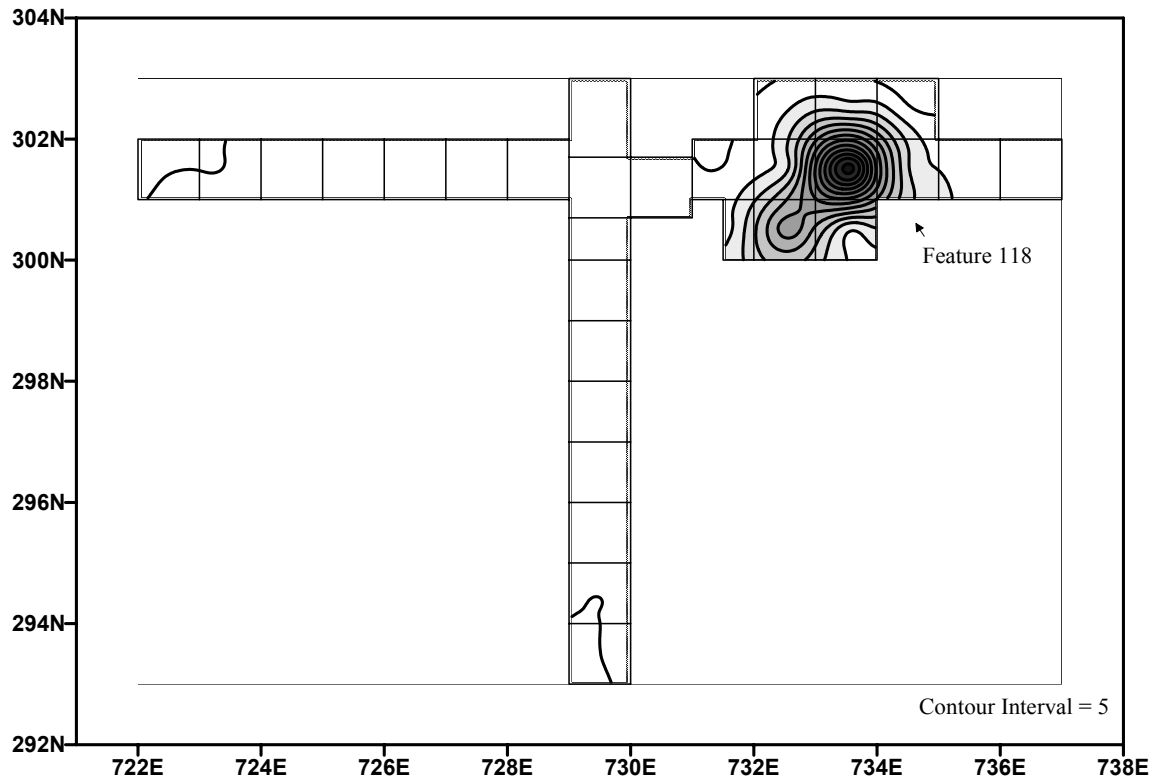


Figure 16.35 Locus C Block 1, Distribution of All Prehistoric Artifacts

Several conclusions may be drawn from the artifact distribution in this block. First, the data confirmed that Locus C Block 1 was an area of overall low artifact density and likely less intensively used. The high numbers of artifacts found in two units were untyped ceramics and although high in count, could reflect post-depositional breakage rather than intense activity. These ceramics were too small (<2 cm) to be considered within the detailed ceramic analysis to determine if they represented the same vessel lot. Second, the distributional spike that occurred in association with Feature 118 implied that the feature had maintained spatial integrity and had not been badly truncated. The artifacts were still concentrated in proximity to the feature and were not spread widely throughout the plow zone. The other features in Locus C Block 1 showed no increase in artifact content relative to the rest of the block.

Since the artifacts in Locus C Block 1 were concentrated in a discrete area, no further distribution plots were completed as part of the spatial analyses for this block. Locus C Block 1 provided information on a low artifact density zone of the site and displayed spatial clustering of artifacts around an identified feature. The block also suggested the possibility that features or discrete activity areas may be located within areas of generally low artifact intensity.

Locus C Block 2

Locus C Block 2 was located in the southeast quadrant of the site in an area of low artifact density, just 5 m north of Locus C Block 1. Two features were identified from excavations in the block: Feature 404, a large basin and Feature 405, a medium basin. The medium basin was located along side, and truncated the western edge of the large basin (Figure 16.36). This overlap suggested separate construction episodes.

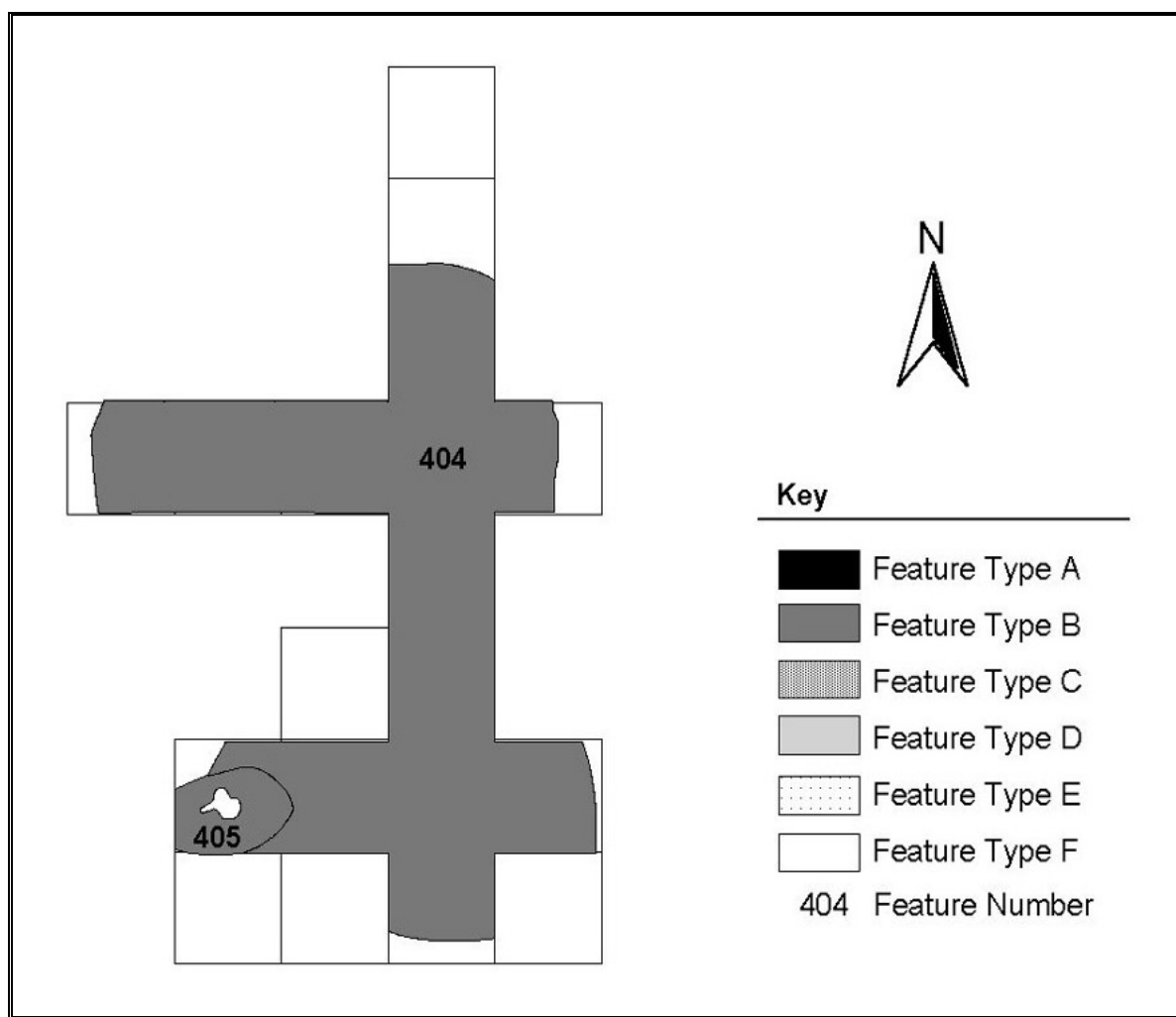


Figure 16.36 Locus C Block 2, Feature Locations

The overall artifact counts for the block were low and did not exceed a total of five for any unit. The majority of artifacts were recovered from the plow zone; only a few were found in either the E-horizon or the features. The highest concentration was located at the north end of the block in association with the northern edge of Feature 404 (Figure 16.37). The remaining artifacts were found clustered near the western side of the block. A noticeable lack of artifacts was observed at the southeast corner of the block and along the eastern wing.

Of the 34 total artifact recovered in the block, 17 were TAS. Two tools, a hammerstone and a jasper Woodland I point (88-2-a) were also recovered. As a result of the low numbers of total artifacts, no further spatial information could be gathered for this block.

Locus C Block 2 confirmed the pattern of low artifact density in the southeast quadrant. In addition, it illustrated the possibility of identifying features within areas of low artifact density and away from the core areas of the site.

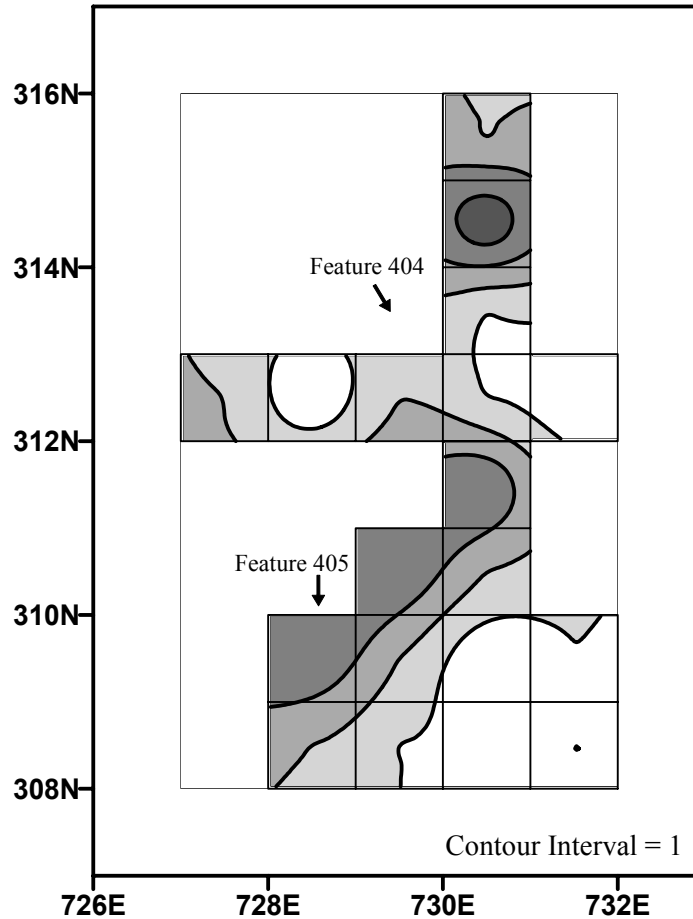


Figure 16.37 Locus C Block 2, Distribution of All Prehistoric Artifacts

Locus D

Locus D was situated near the center of the site in an area considered a medium artifact density zone from initial shovel test data. Ten features were identified in Locus D (Figure 16.38). These included three basin varieties that also evidenced varying degrees of natural disturbances (Features 4, 111, and 117). Three other features were biotic tree molds or root channels (Features 40, 112, and 119). The remaining four (Features 15, 16, 23, and 41) were natural irregularities likely reflecting differential weathering of the soil profile. The locations of the features were sporadic throughout the locus, with the greatest concentration being a cluster of natural and biotic anomalies in the eastern excavation block. The relatively low density of features suggested a less intensive utilization of the area.

The distribution of total artifacts from the block illustrated that the area was of low to medium artifact density, with counts per unit ranging from 0-59. Some variation between units was evident and two prominent clusters were identified (Figure 16.39). The first, which had the highest counts, was situated just north of Feature 111. The second was found at the southern end of the block near Feature 117. These clusters were still evident when artifacts were distributed by type, and although the southern cluster contained more ceramics and less debitage than the northern cluster, they both remained distinguishable.

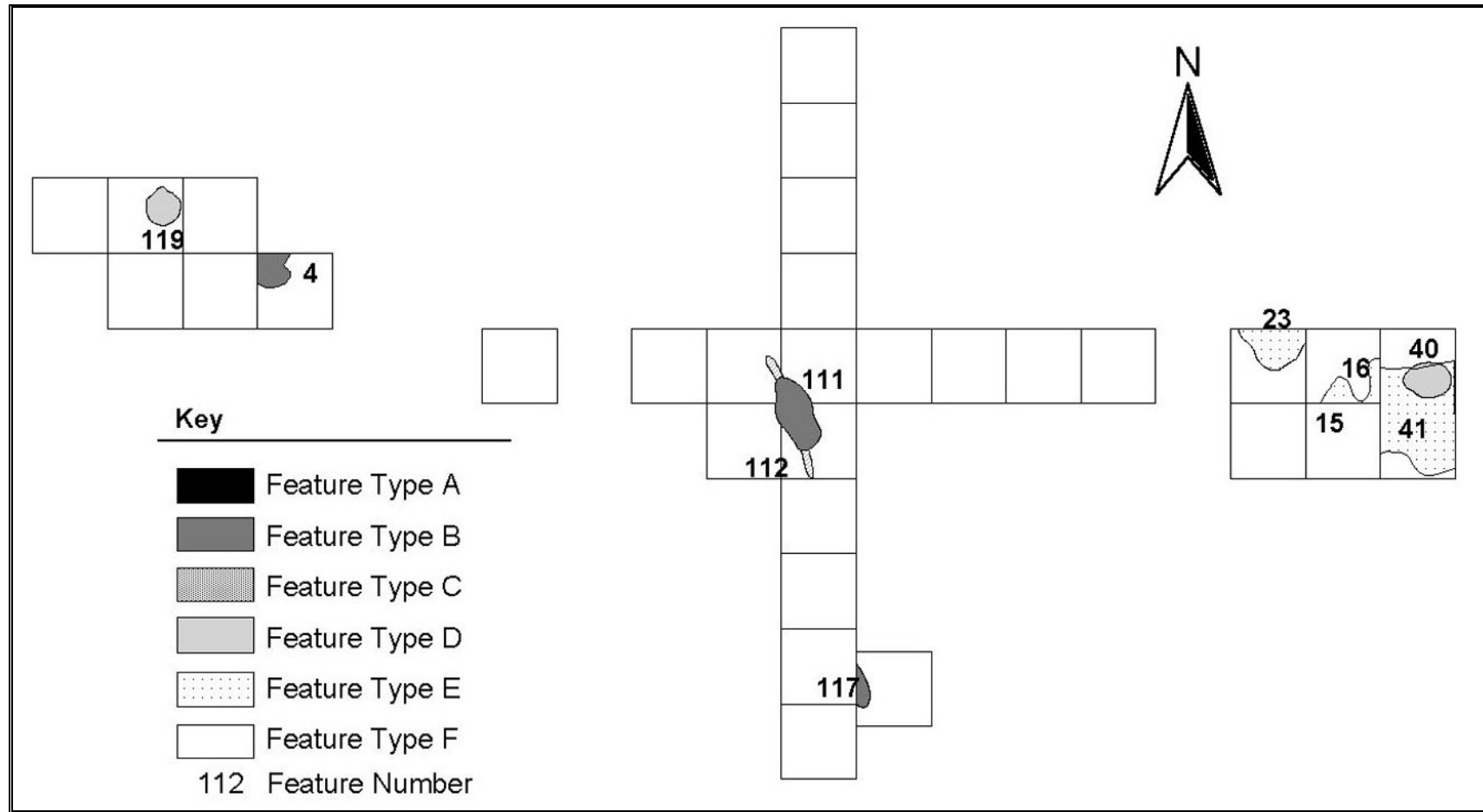


Figure 16.38 Locus D, Feature Locations

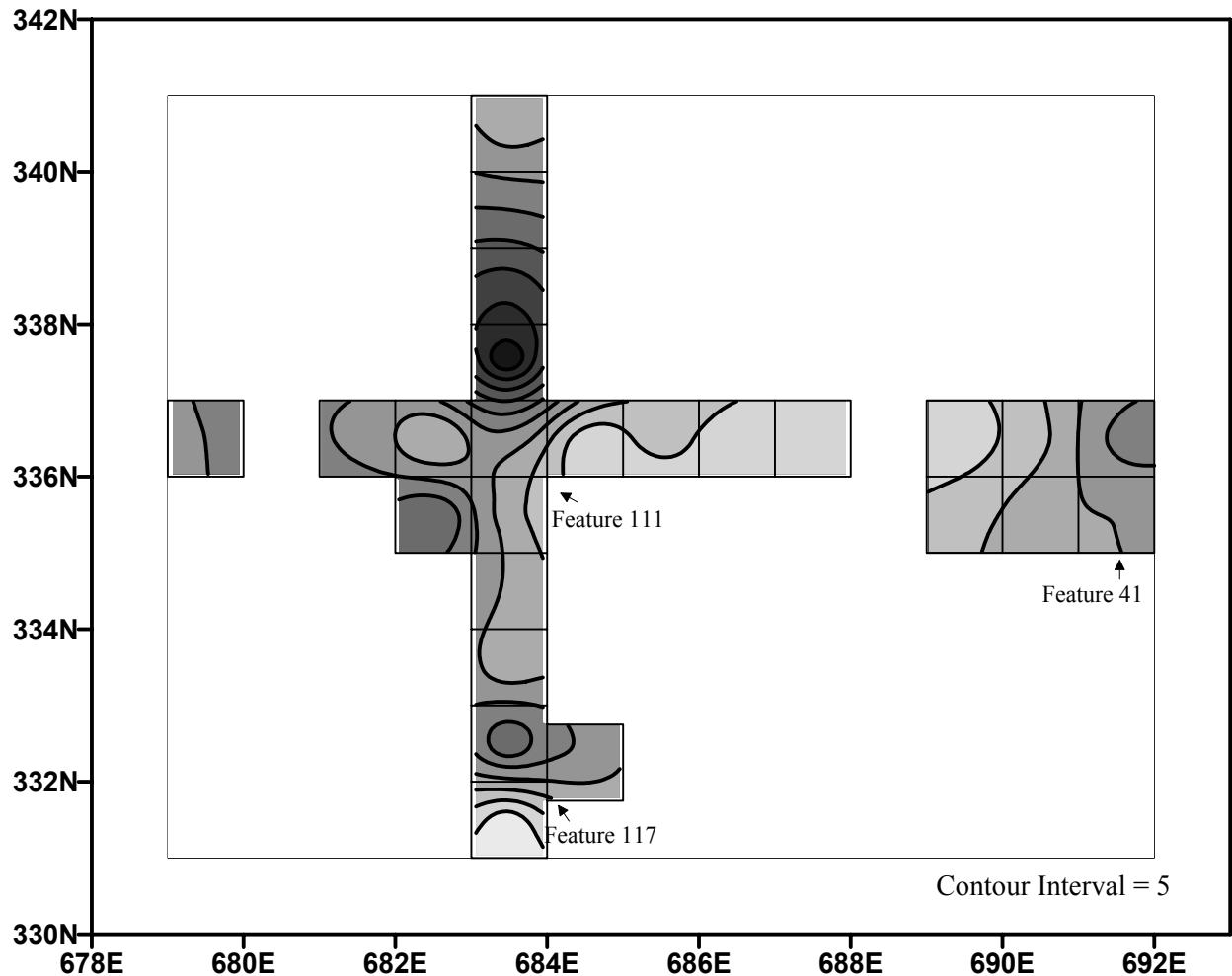


Figure 16.39 Locus D, Distribution of All Prehistoric Artifacts

An interesting trend was noted for Locus D when artifacts were plotted by their universal strata. The plow zone distribution correlated closely with the overall distribution, which was expected as the majority of artifacts in the locus were recovered from the plow zone. However, the distribution of sub-plow zone artifacts outside of feature contexts displayed a different pattern than expected from the overall artifact distribution (Figure 16.40). In general, throughout the block, the counts for sub-plow zone artifacts decreased in each unit. Specifically, in the eastern portion of the cruciform and western portion of the 3 x 2 m block, the counts decrease to only 0-5 per unit. This suggested that the activity within this area was likely more concentrated to the western portion of the block and that plowing had redistributed artifacts to the east, where they were found in the plow zone almost exclusively. The separation that occurred between the artifact clusters to the west and the cluster noted in the 3 x 2 m block to the east suggested different discrete activities.

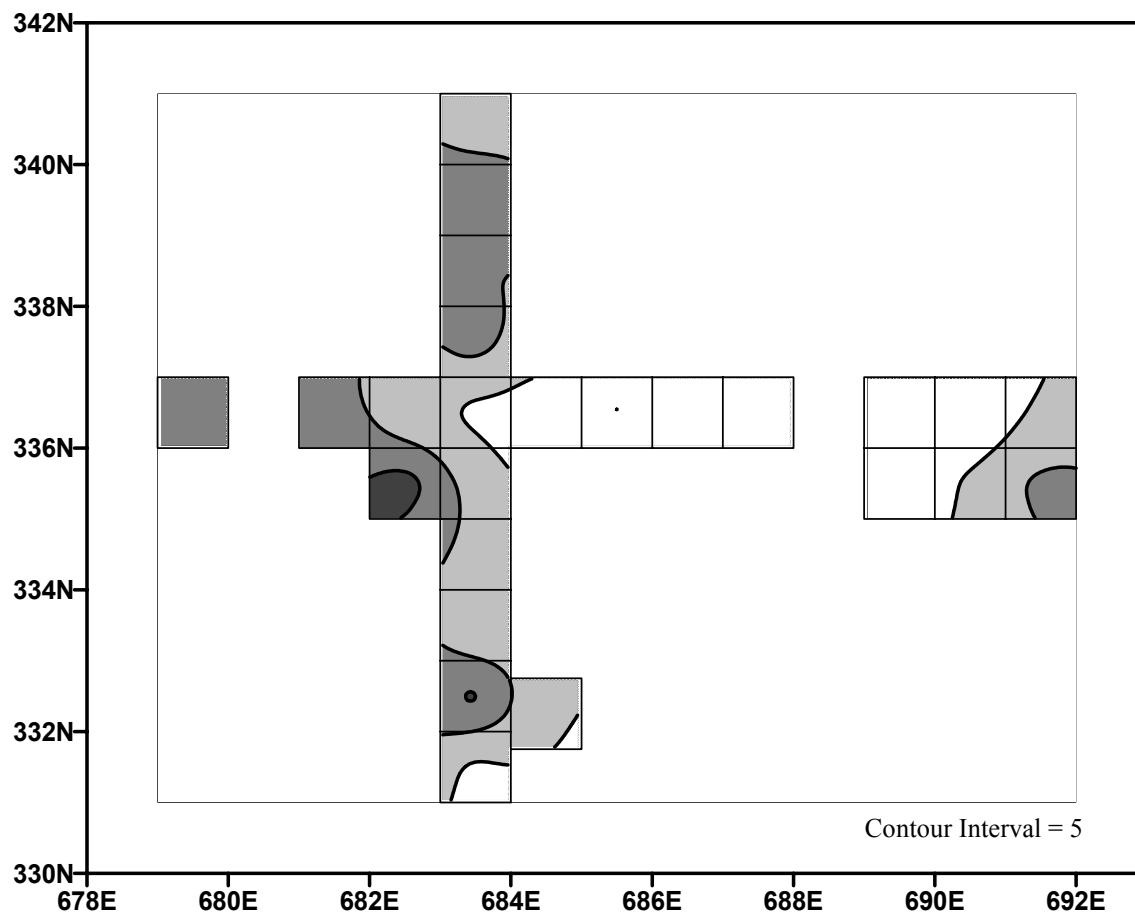


Figure 16.40 Locus D, Distribution of Sub-plow Zone, Non-feature Artifacts

Ceramic Distribution

Locus D had a low frequency of ceramics. The majority of the ceramics were Clay Tempered, followed by untyped sherds. Vessel Lot CC04 was recovered from Locus D and its location was overlaid on the distribution plot of all ceramics for the block (Figure 16.41). Vessel Lot CC04 consisted of three sherds. Two of these sherds cross-mended and were recovered from adjacent test units. The locations of Vessel Lot CC04 also coincided with the small clusters of ceramics identified in the center of the block. Vessel Lot CC13, which consisted of only one sherd, also was recovered from Locus D. Its location also coincided with a small cluster of artifacts within the block. Both ceramic lots from this block consisted of a small number of sherds, which suggested a fair amount of dispersion of these vessels had occurred. The relative proximity of the sherds recovered from Vessel Lot CC04, however, suggested that there was some spatial integrity. More important was the fact that, although the overall ceramic counts were low for the block, the sherds were primarily all Clay Tempered ceramics. This result suggested a more focused and limited intensity of use for this particular part of the site. Furthermore, despite the low numbers of ceramics, at least two vessels were identified, which is a small number but coincides with the overall pattern in the block, of a focused and limited use of this part of the site.

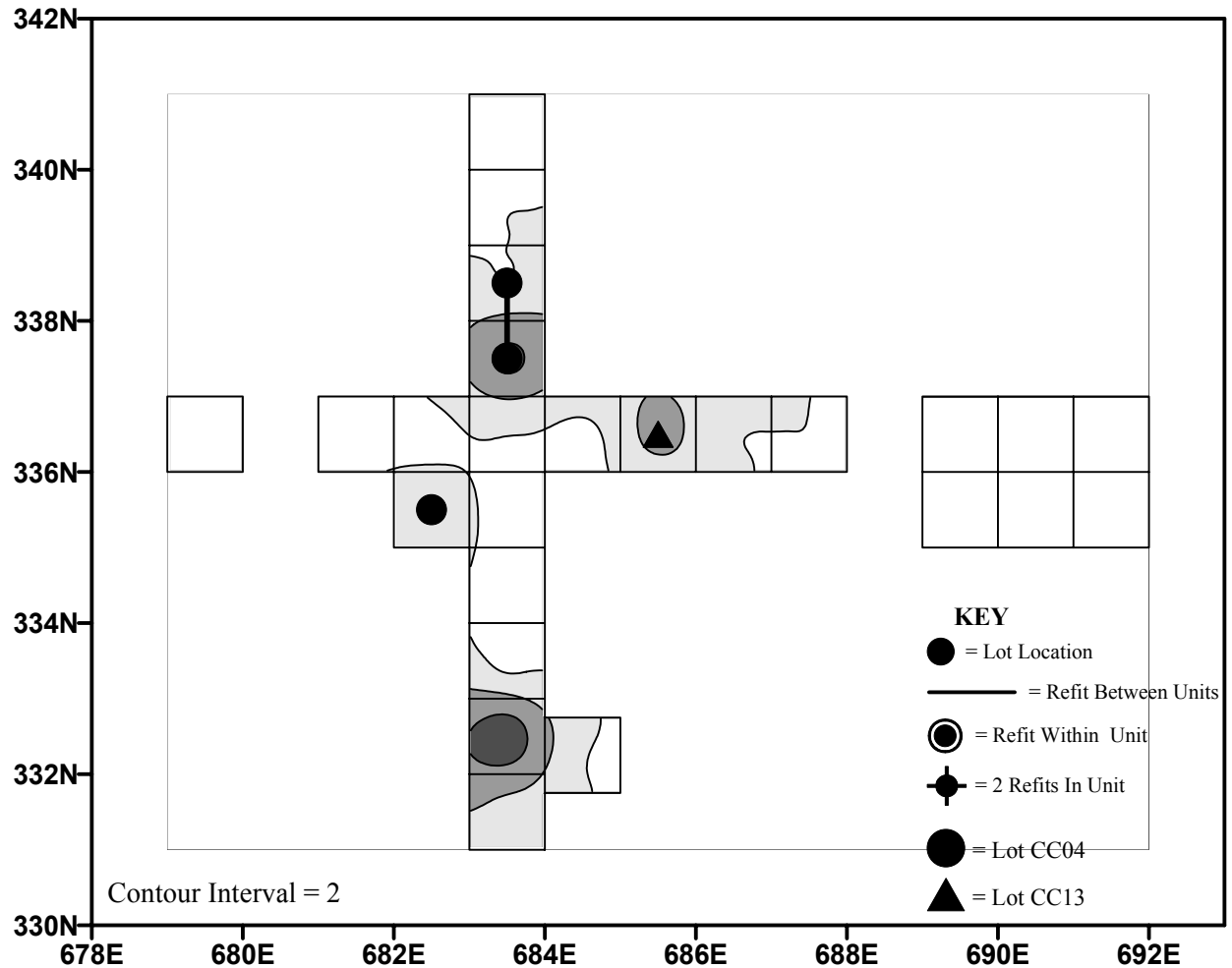


Figure 16.41 Locus D, Location of Vessel Lots CC04 and CC13, Overlaid on Distribution of All Ceramics

Summary

The patterns suggested by the Locus D artifact distribution had important implications for the wider site analyses. This medium artifact density zone appeared to retain some spatial integrity, after filtering out the levels of disturbance. The sub-plow zone distribution of artifacts displayed more integrity and maintained clearer horizontal separation, than did the plots for all artifacts. The two identified clusters contained similar artifacts and low to medium frequencies. The identified clusters also displayed no clear association with the evident features within the block. The southern cluster was located near Feature 117, which did not contain any artifacts. The northern cluster was located near Feature 111, which contained only six artifacts. This suggested a limited range of activities and less intense use of this part of the site.

Locus E

Locus E was located in the northeast quadrant of the site, which varied from a low to medium artifact density zone. Excavations in Locus E identified a total of 14 features, which

included 4 basins (Features 3, 113, 131, and 312) and 1 surface feature (Feature 138). Natural features included 3 biotic patterns (Features 124, 130, and 143) and 1 combination of geomorphic and biotic patterns (Feature 100). The distribution of the features revealed overlap in both the northern and southern sections of the block, separated by a large area devoid of features (Figure 16.42). The overlapping basins in the northern section suggested greater intensity and focused activity in this part of the block. The overlap of basins, geomorphic, and biotic features in the southern part of the block showed the often complex interactions of different site formation processes even within a small area.

The distribution of all prehistoric artifacts in the block revealed four separate artifact clusters (Figure 16.43). However, within this block, features identified to the south were left in bisection (east half removed). Excavation of the units to the west of the bisection was discontinued after the removal of the plow zone and the planview delineation of features. This methodology likely influenced the cluster located to the south, which could have extended further to the west. Comparison of plow zone and sub-plow zone artifact distributions showed that these clusters remained visible, and suggested that they maintained spatial integrity despite plow disturbance.

The first cluster was located within the western wing of the block. Plotting of artifacts by category indicated that this cluster consisted of mostly lithic debitage, to a lesser extent, TAS, both within the plow zone and the E-horizon (Figure 16.44). The next cluster occurred in the southern section of the block east of Feature 100, and was characterized by a high frequency of lithic debitage within the plow zone and to a lesser extent, debitage and TAS in the E-horizon. The remaining two clusters were located within the northeastern portion of the block and were adjacent to each other. The first was located near Feature 3 and was characterized by a high number of lithic debitage in the plow zone. Sub-plow zone plots for artifact types resulted in the diffusion of this cluster. The fourth cluster was the furthest north in the block and was associated with elevated TAS counts associated with Feature 113 and the plow zone above the feature (Figure 16.44). When plots of other artifact types and feature contexts were removed, this cluster lost definition. Ceramic counts across the whole block were too low to provide any meaningful spatial data. However, the general lack of ceramics within this particular block was important as a sitewide distribution pattern. The artifact clusters identified within Locus E demonstrated several significant patterns. First, they maintained spatial separation from each other. Second, they remained, for the most part, visible in both plow zone and sub-plow zone plots. Third, each displayed differences from the others in terms of artifact composition and the soil context that they were primarily recovered from. These complementary results suggested differential use of this area for activities. The degree of overlap among the features suggested that this location had a moderate intensity of use.

Northwest Main Block

The Northwest Main Block represented the area of highest artifact frequency for the site. It was initially divided into Loci F, G, H, and I. Loci F, G, and part of H were subsequently joined together. This block comprised the largest open area excavation at the site, consisted of 308 contiguous 1-m squares, and provided the most complete and uninterrupted spatial data. Therefore, a series of distribution plots of varying resolution will be presented for this area to assess the spatial patterning.

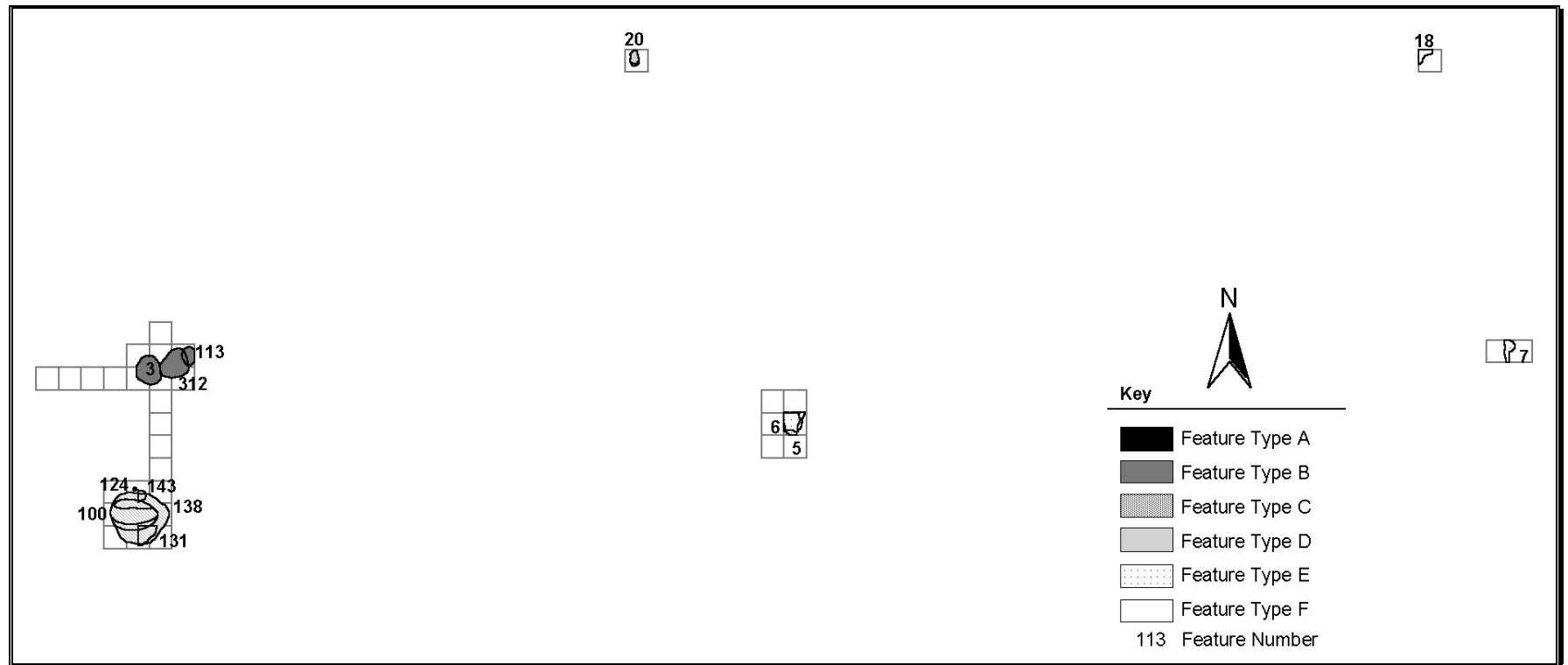


Figure 16.42 Locus E, Feature Locations

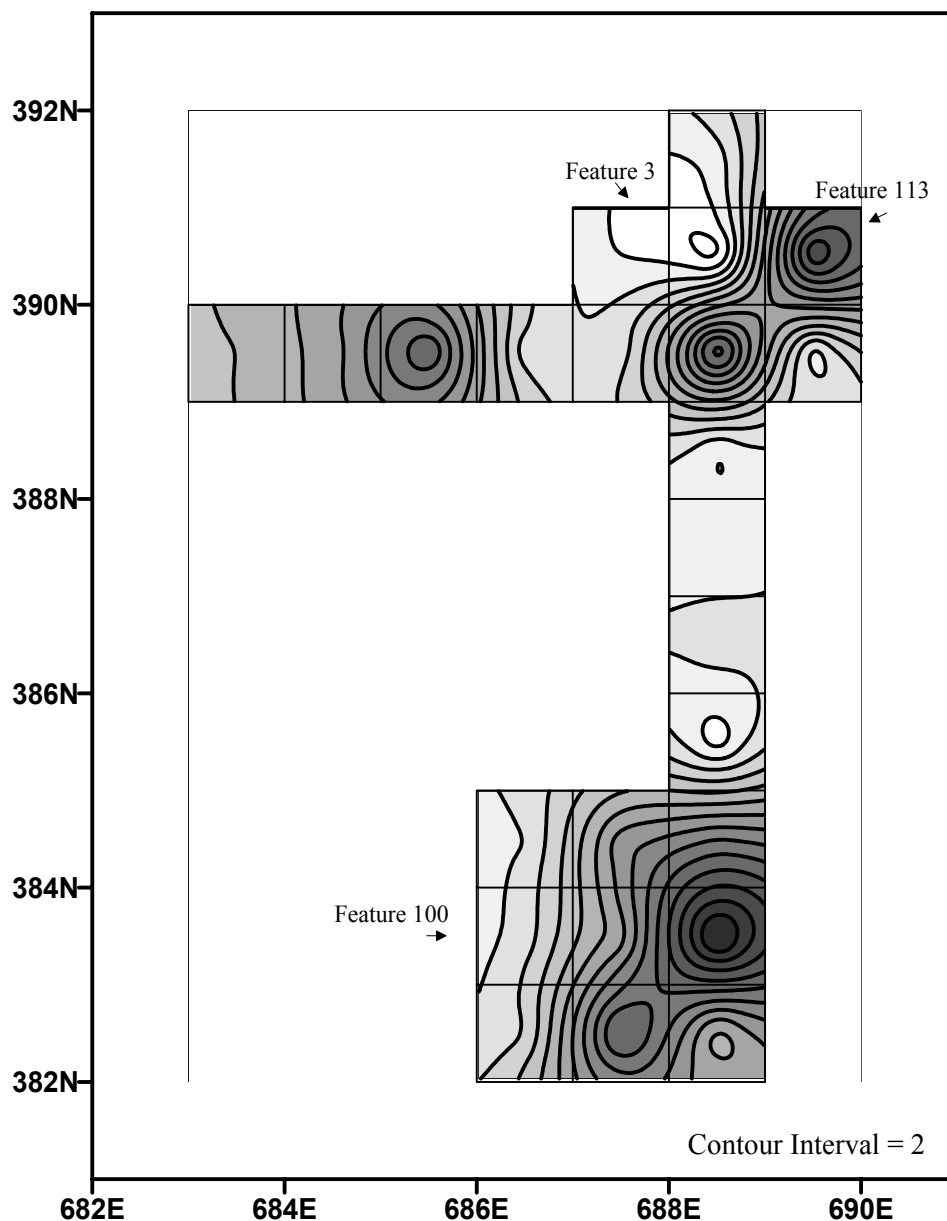


Figure 16.43 Locus E, Distribution of All Prehistoric Artifacts

Nineteen features were identified in Locus F (Figure 16.45). These included one probable large basin (Feature 60); two medium basins (Features 139 and 233); one small basin (Feature 44); and one small basin with an artifact concentration (Feature 37); as well as several medium to large TAS concentrations (Features 46, 158/160, 159, 164, 176, 224, 280, 281, and 289).

Biotic disturbances included both tree root and mold patterns and rodent burrows (Features 56, 142, 181, and 259). Geomorphic anomalies included Features 24 and 188. The TAS clusters were concentrated on the western side of Locus F adjacent to the bluff edge. The northeastern part of the block was devoid of evident features, which suggested a focused and intense use of the block around the TAS clusters. The several biotic disturbances were found in

and among the TAS clusters but did not appear to impact the features, as visual boundaries were still evident.

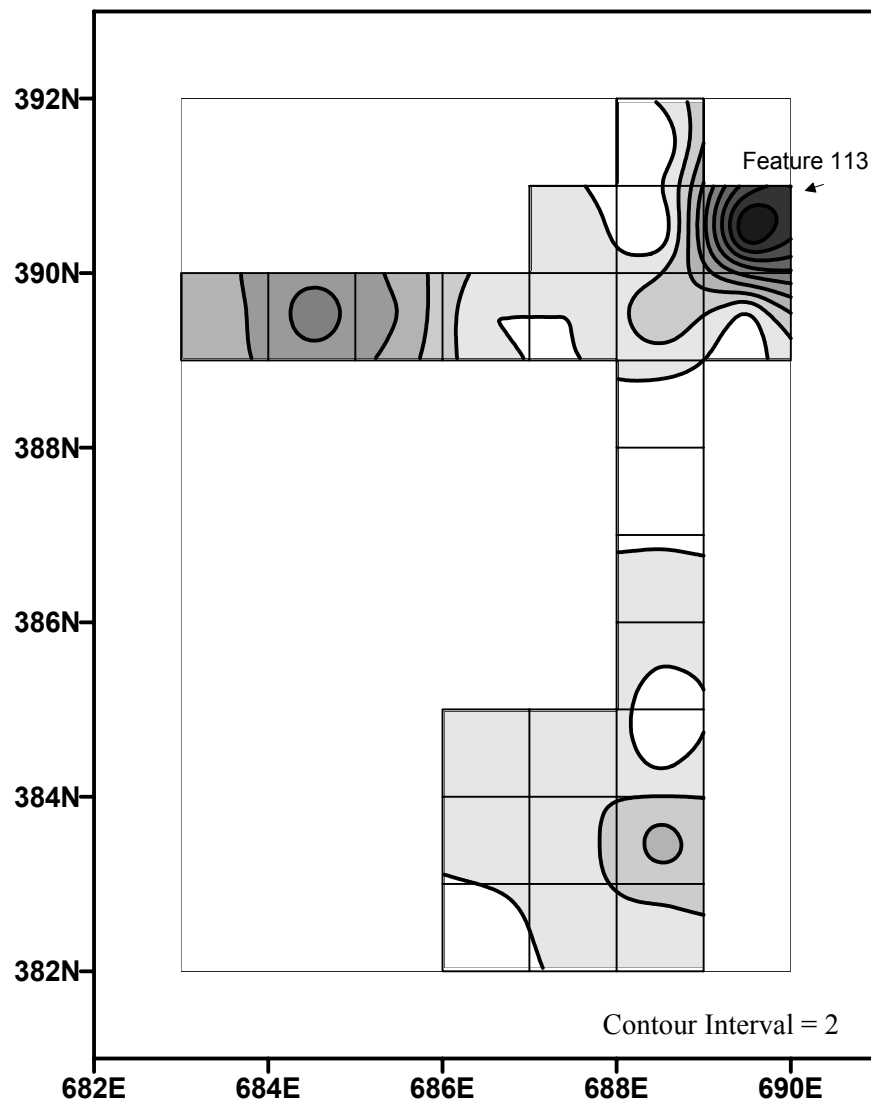
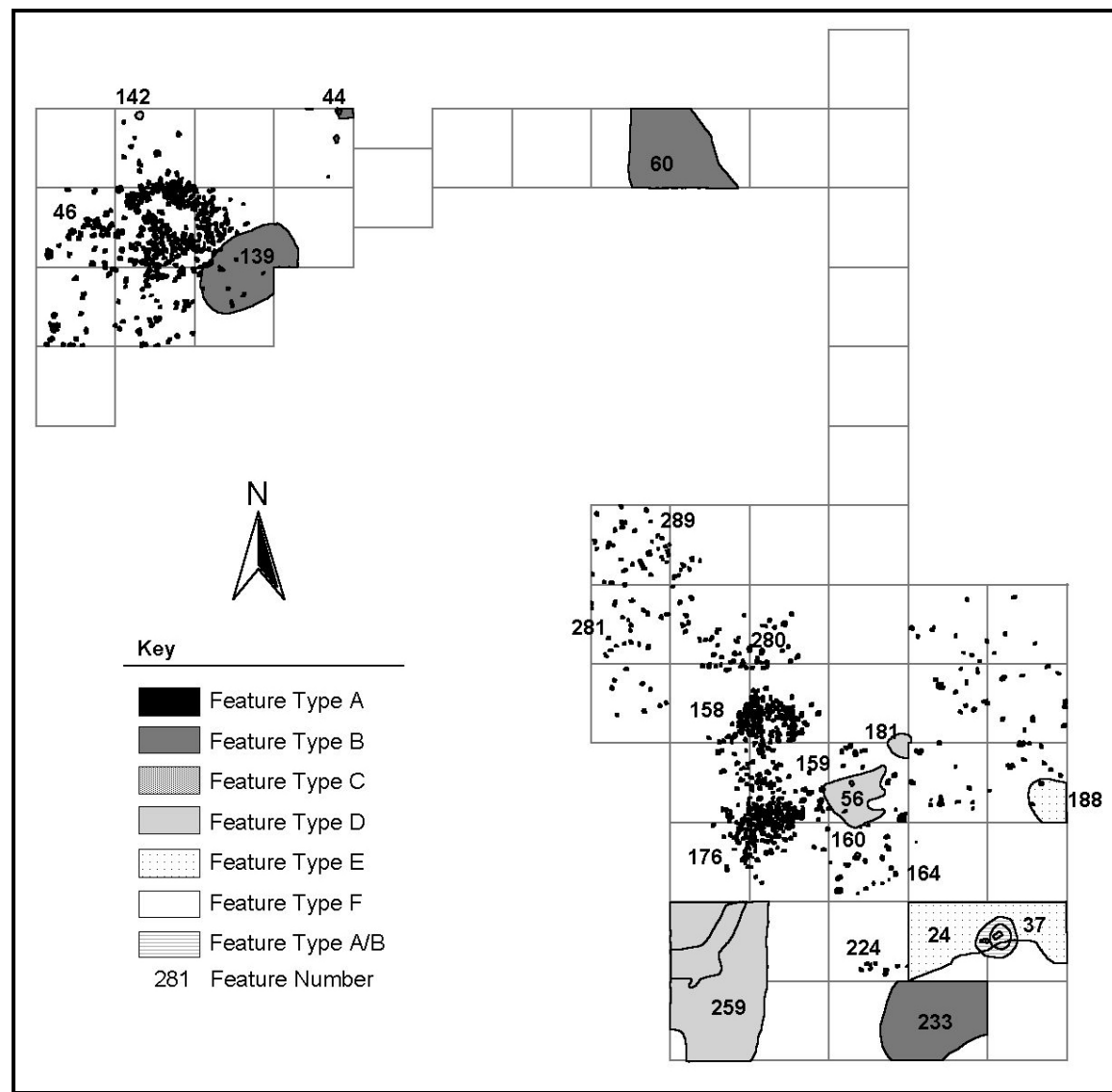


Figure 16.44 Locus E, Distribution of TAS

Locus G contained a total of 61 features that represented all feature types recorded at the site (Figure 16.46). Basin features of various sizes and shapes accounted for 17 features and included Features 1, 2, 31, 169, 180, 184, 234, 265, 270, 273, 274, 275, 279, 282, 297, 298, and 310. An additional five features were combinations that contained basin attributes with significant biotic disturbances: Features 232, 271, 287, 291, and 313. Artifact features included TAS Features 55, 87, 101, 172, 230, 249, 284, 296, and 311 as well as a cluster of ceramics (Feature 178) and a cluster of modified lithic tools (Feature 294). The surface features that were identified included Features 36, 89, 187, and 258; these ranged from areas of charcoal concentration to compacted soils and contained some level of natural disturbance, especially

**Figure 16.45 Locus F, Feature Locations**

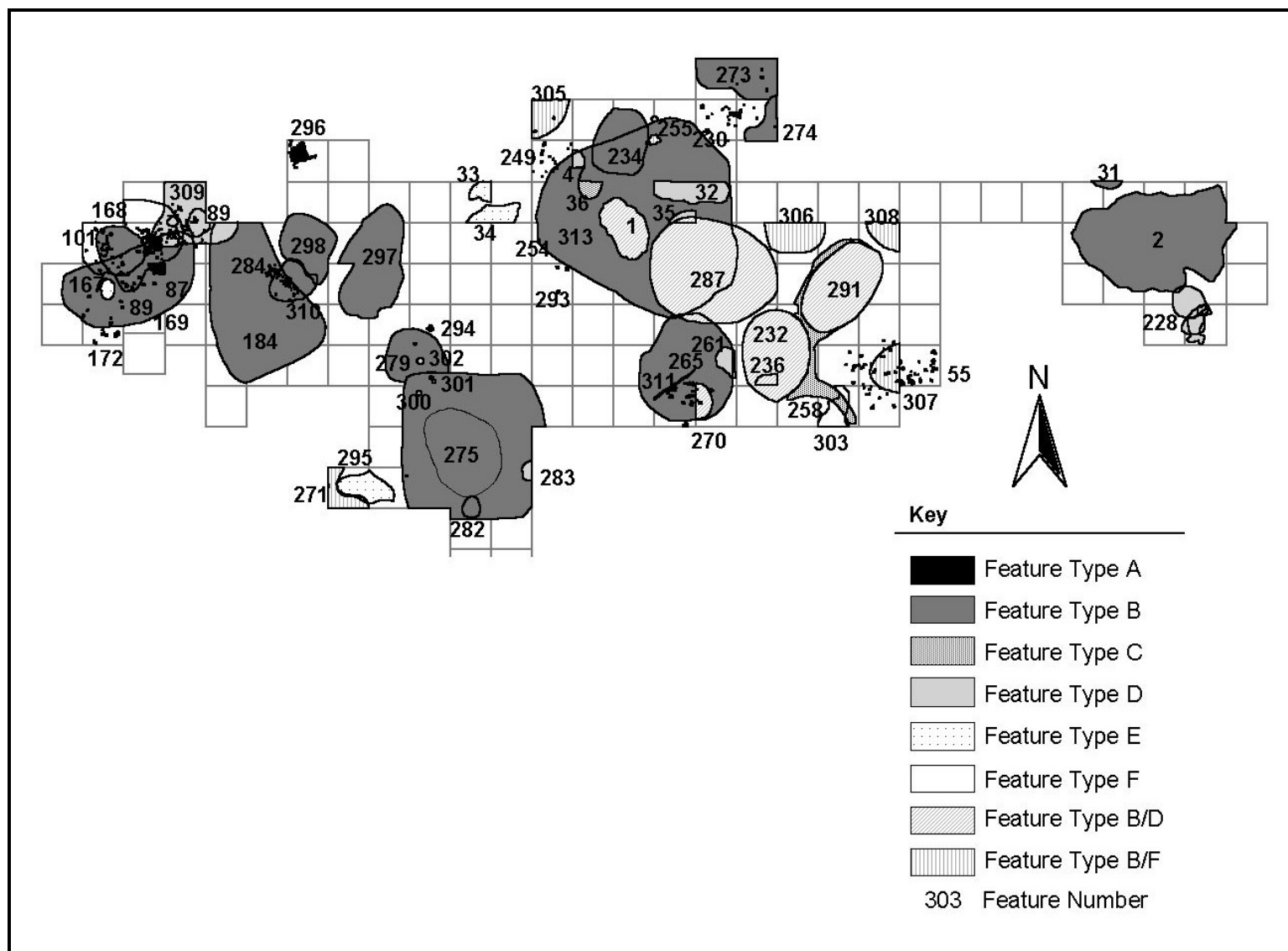


Figure 16.46 Locus G, Feature Locations

Feature 89. The full variety of biotic features were identified in Locus G and were represented by Features 32, 35, 47, 88, 228, 254, 255, 261, 283, 293, 300, 301, 302. Only three geomorphic features were noted; Features 33, 34, and 295. The remaining eight features were presumed natural or their type was unable to be determined: Features 167, 168, 303, 305, 306, 307, 308, and 309.

The features in the block evidenced both overlap and spatial discreteness. Several TAS clusters were noted in proximity to large basins, such as Features 87 and 172 with Feature 169; Feature 284 with Feature 184; Feature 249 with Feature 1; Feature 230 with Features 273 and 274; and Feature 311 with Feature 265. The basins were located throughout the block, but a heavy concentration occurred in the central portion of the block which suggested a greater intensity of use for this part of the block.

Locus H Block 1 contained a total of 36 features (Figure 16.47). These included basins of varying morphology (Features 77, 94, 129, 267, 288, and 299); TAS clusters (Features 165, 166, and 272); and several features that displayed a diverse combination of characteristics that could not be determined (Features 66, 257, 277, and 290). Natural and geomorphic occurrences were represented by Features 58, 61, 186, and 304. Various biotic features were well represented in Locus H Block 1 and included Features 63, 64, 65, 68, 69, 71, 72, 128, 132, 140, 141, 144, 147, 148/149, 150, 156, 185, 231, and 268. Basin features intersected one another to varying degrees, TAS clusters were found within basin feature boundaries, and natural disturbances were found throughout the block. This degree of overlap suggested a higher level of activity concentrated in this area and made identification of specific associations between features and particular occupations or activities difficult.

The plot of total artifacts for the block revealed three large, dense artifact clusters and several smaller, less dense artifact clusters (Figure 16.48). The first and most dense cluster was associated with the location of Feature 46, a large, densely packed cluster of TAS found in the western section of Locus F. The second large cluster was located along the western edge of Locus G, in the vicinity of Features 87, 101, and 169. The third cluster of artifacts was located in the southern part of Locus F and was associated with TAS Features 158 and 176. The secondary clusters were observed in several areas: the southern portion of Locus G, just north of Feature 46; a large area along the north-central portion of Locus G near Feature 1; at the southern end of Locus H; and a final cluster at the north end of Locus H near Feature 129.

Lithic Distribution

The plot of lithic debitage within the block revealed four distinct clusters (Figure 16.49). The most prominent cluster was noted at the south end of Locus G, just north of Feature 46. A second large cluster stretched across Locus H near Feature 129. This cluster was not as evident in the plot for total artifacts. At the northern edges of Locus G near Feature 1, clusters three and four were evident. Perhaps more interestingly, were the areas within the block that displayed lower counts for lithic debitage. This absence was especially noticeable along the eastern and southwestern portions of Locus G near Feature 2. In addition, smaller areas at the north of Locus H and the northeast of Locus F displayed low concentrations of lithic debitage. The variability that was observed for this artifact class suggested different flint knapping episodes or the differential use of space within the block.

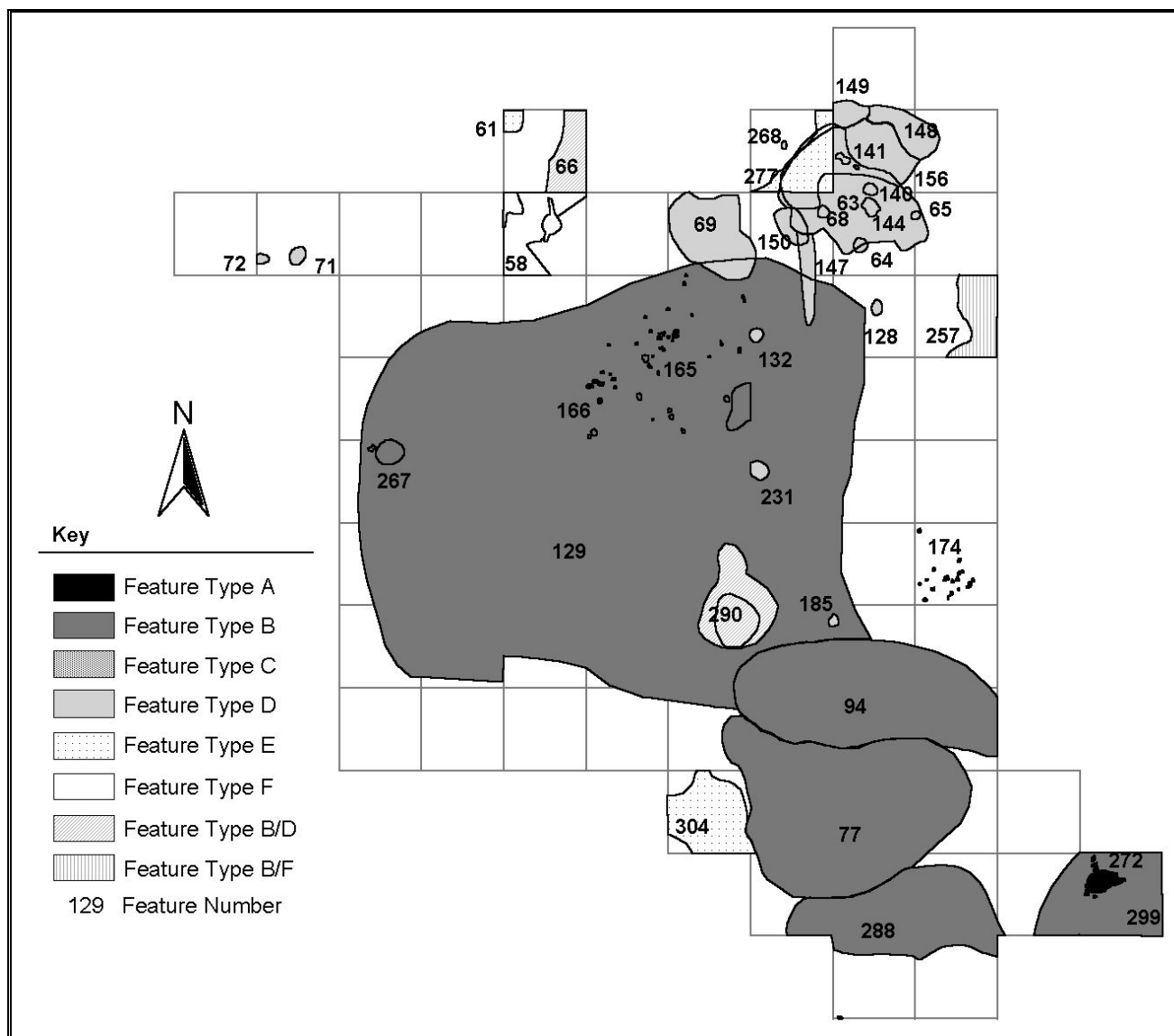


Figure 16.47 Locus H, Block 1, Feature Locations

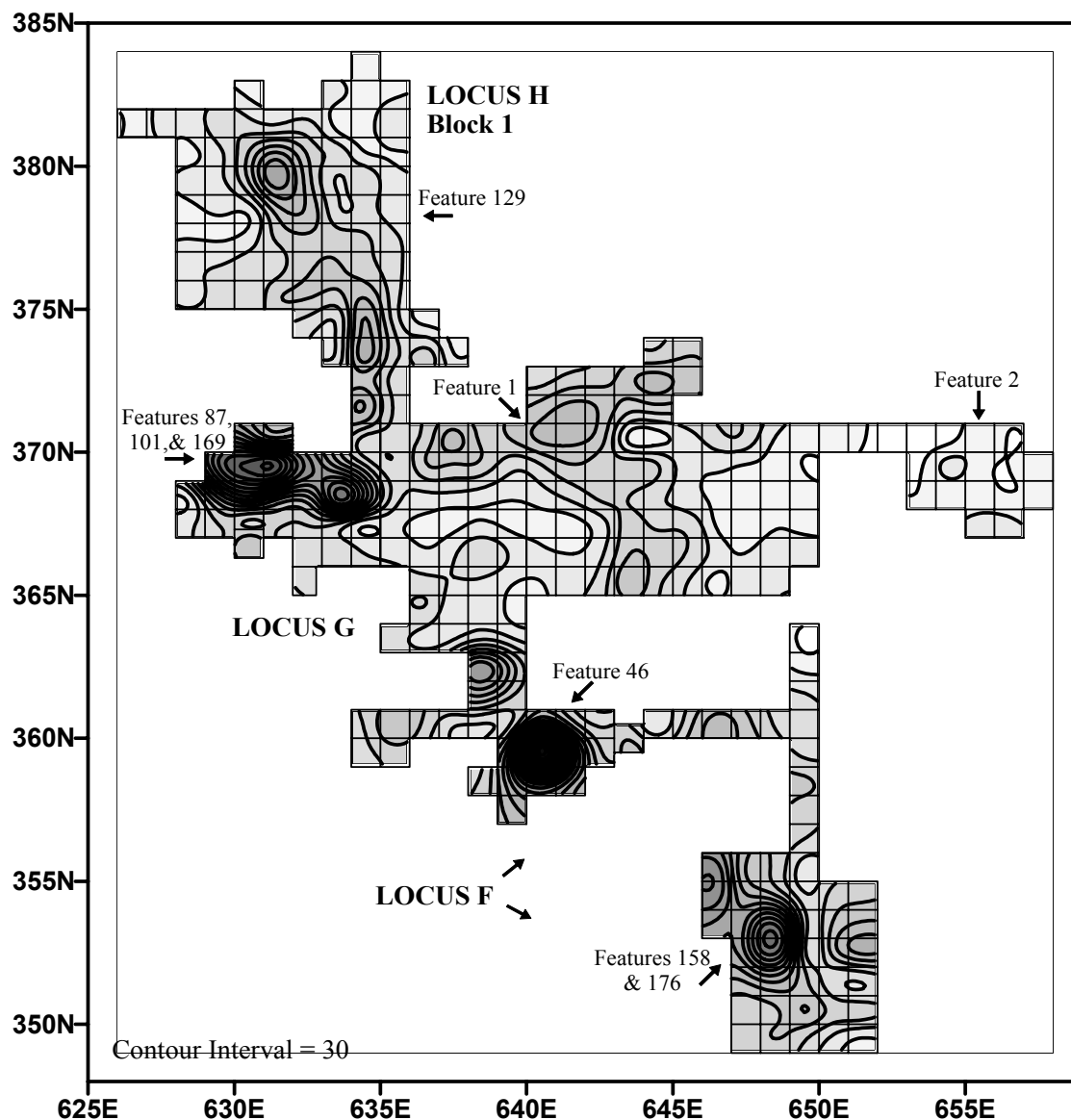


Figure 16.48 Northwest Main Block, Distribution of All Prehistoric Artifacts

A plot of lithic debitage within the Northwest Main Block revealed a sizable cluster of lithic debitage located at the intersection of Loci F and G just north of Feature 46. A further effort was made to categorize and identify the contents of this cluster to determine if it represented a discrete knapping cluster or a secondary deposit of refuse. Plotting lithic debitage by specific material type produced several different results. One of the most interesting was the distribution of rhyolite debitage (Figure 16.50). This plot showed a large cluster located in the same location as the cluster noted for all lithic debitage, which suggested the cluster was comprised primarily of rhyolite. The identification of this rhyolite cluster was important for several reasons. First, it illustrated the identification of a latent feature through computer plotting of the data. Second, on the whole, rhyolite was found with less frequency compared to other material types, suggesting more limited use of this material at the site. The identification

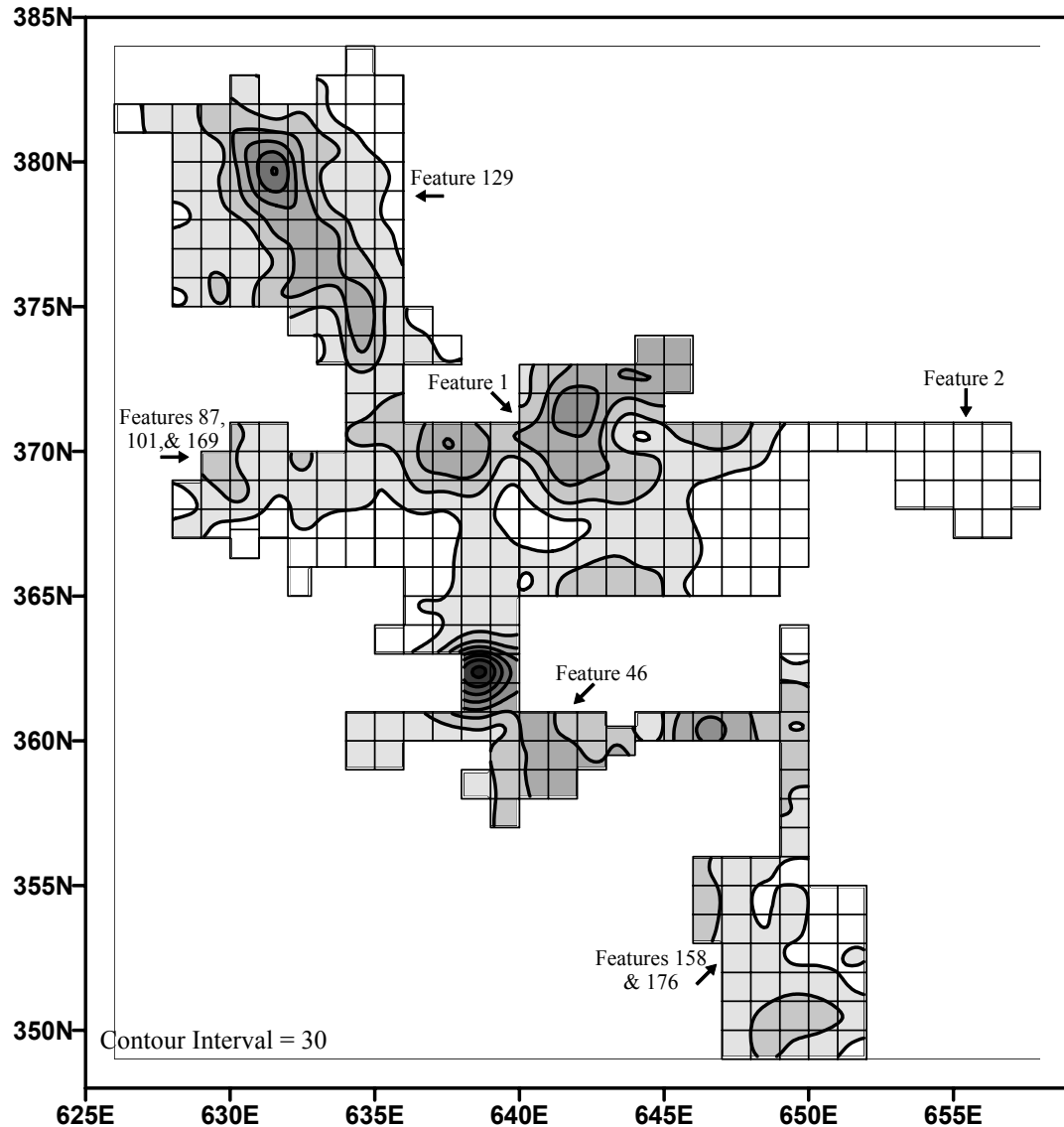


Figure 16.49 Northwest Main Block, Distribution of Lithic Debitage

of a cluster of this material suggested the possibility of a single event as opposed to the long term processes of accumulation more common at Hickory Bluff.

The majority of units within the Northwest Main Block contained between 0-20 pieces of rhyolite debitage. Around the identified rhyolite cluster, the counts were as high as 245 rhyolite artifacts for a single unit. This obvious elevation in counts suggested a fairly discrete spatial location for a material of limited distribution across the site. In addition to the lithic debitage in this area, four rhyolite projectile points were also located in spatial proximity to the cluster of debitage (Figure 16.51). Of these points, only one was identifiable as to type: a Late-Archaic/Transitional Susquehanna point (3867-3). The other three rhyolite projectile points were too fragmentary to type (3905-1; 3840-1; 1569-1). The close proximity of the Susquehanna point and the large rhyolite debitage cluster, is a pattern observed at other Late Archaic sites

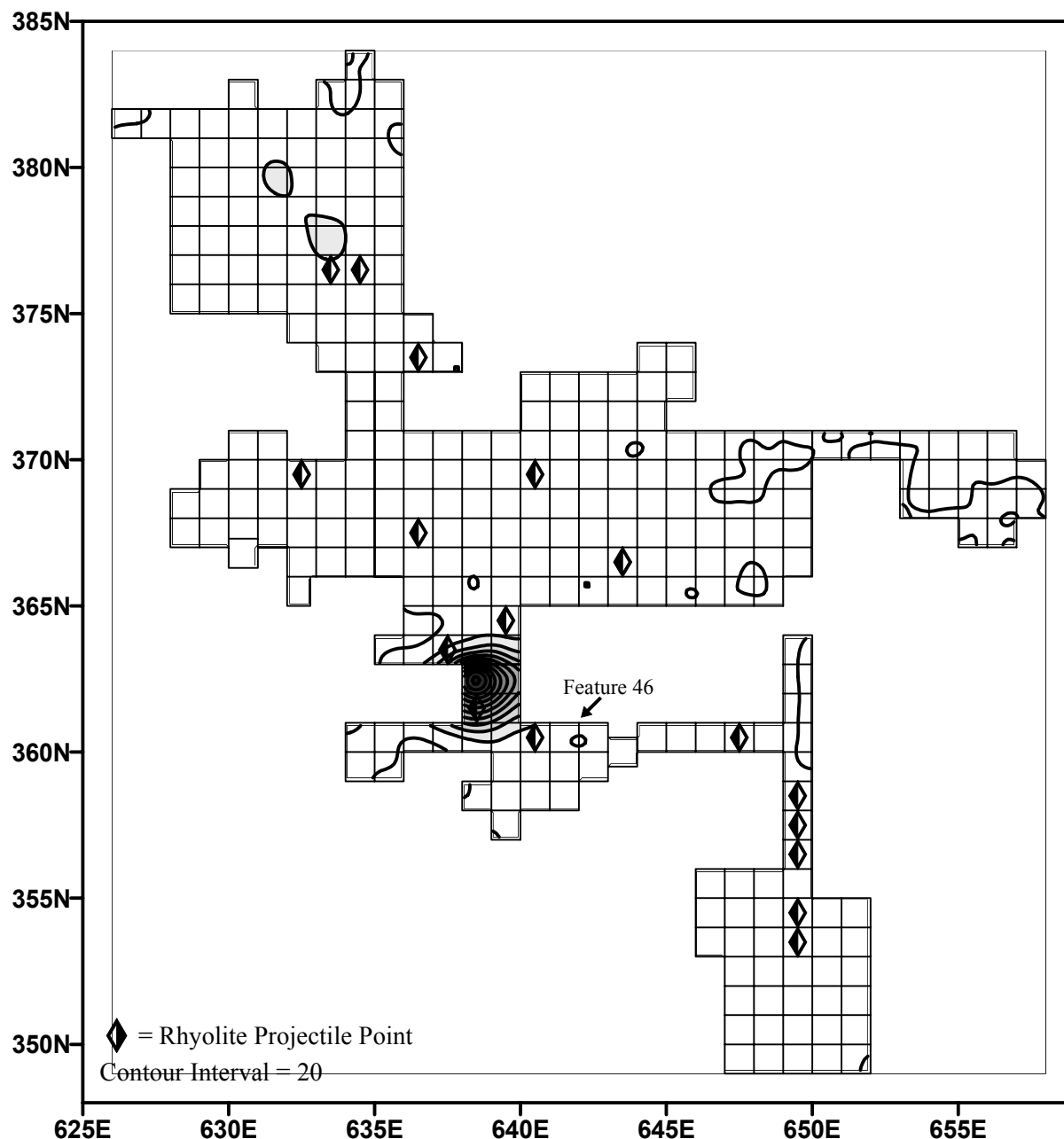


Figure 16.50 Northwest Main Block, Distribution of Rhyolite Debitage and Location of Rhyolite Projectile Points

(Custer 1984b, 1988). Although tentative, the presence of the Susquehanna projectile point in spatial association with the rhyolite debitage cluster suggest a Late Archaic period date for the cluster. No other chipped stone tools made of rhyolite were recovered from the test units that incorporated the rhyolite debitage cluster or occurred in close spatial proximity. However, several ground stone tools were recovered from within the debitage cluster (Figure 16.52). These included two hammerstones (3845-1 and 3860-5) and two double pitted stones (3843-4 and 3843-5). Although the function of such tools is by no means clear, one of the hammerstones (3860-5) displayed distinctive battering that may be related to its use in flint knapping activities.

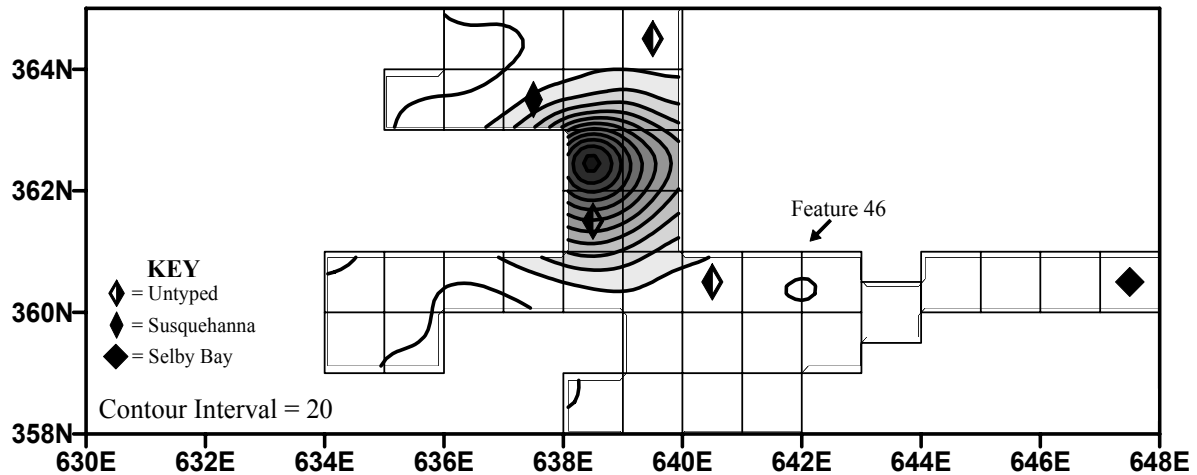


Figure 16.51 Detail of the Northwest Main Block Rhyolite Debitage Cluster and Projectile Points

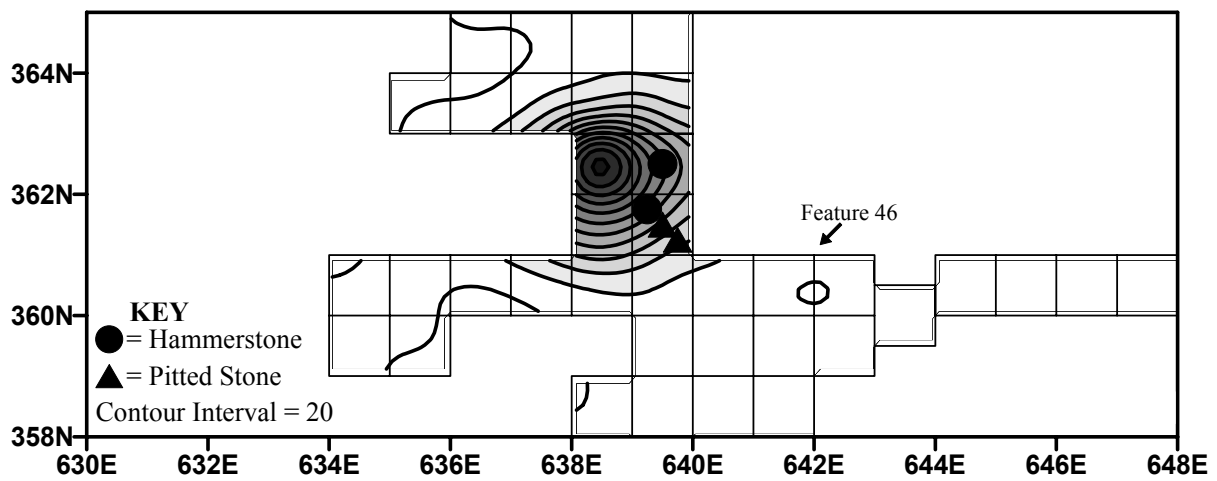


Figure 16.52 Detail of the Northwest Main Block Rhyolite Cluster and Cobble Tools

The other hammerstone also displayed battering but was less distinctive. The use of pitted stones is uncertain, although conjecture has been made about the possible association of double-pitted stones and bipolar reduction strategies. Both pitted stones recovered in this location had dimpled recesses indicating a battering or pounding use (Section 13.0). The proximity of these tool types to this cluster of debitage appears to be significant and further supports the interpretation of this cluster as a discrete cluster that retained spatial integrity and could represent a single or limited activity area related to production of rhyolite artifacts.

The size grade breakdown provided several interesting results. Noticeably absent from the cluster were large fragments of debitage, as none were greater than 4 cm in dimension. The majority (68 percent) of the pieces measured 1-2 cm (size grade 2) in size, which was slightly higher than the sitewide debitage average of 61 percent in this size grade. Taken together, these data suggested that the knapping activities taking place in this immediate area were either for

tool maintenance or finishing. Additionally, the results could also suggest the conservation of this specific material, such that larger pieces created in the reduction process were either broken down further or removed for further use. Such reuse could have occurred at the time of initial deposition or during any of the subsequent reoccupations of the site.

The final issue considered in the assessment of this debitage cluster was the range of the size grades of the flakes comprising the feature. The elevated counts of rhyolite lithic debitage were identified in eight test units: N361 E639-640, N362 E639-640, N363 E639-640, and N364 E639-640. In total, these units yielded 681 pieces of rhyolite lithic debitage (Table 16.5).

Table 16.5 Size Grades of Rhyolite Lithic Debitage Artifacts in Cluster

Size grade	Total count	Percent
1	96	14
2	460	68
3	106	16
4	19	3
TOTAL	681	100

The example of this particular latent feature illustrated the possibility that discrete activity and single or limited use features were present and identifiable at the site amidst the heavily overprinted spatial patterning generally observed.

The second cluster of lithic debitage identified was located in the northern half of Locus H Block 1 and extended southeast across that part of the block. When plotted by material type, quartz debitage accounted for the northern part of the cluster (Figure 16.53). Quartz was commonly found across the site but not identified in discrete clusters, making this cluster unique. The debitage cluster was located in the vicinity of large basin Feature 129 and two small TAS clusters, Features 165 and 166. A variety of chipped stone tools made of quartz were located in and around the debitage cluster. These included six early stage and two late stage bifaces, as well as seven projectile points, suggesting that a range of reduction activities may have been performed in this location. Several hammerstones were located throughout the block, three of which were located around the center of the cluster (839-3, 2749-3, 3406-15); others were found at the southwest periphery of the cluster (821-2, 2645-7, 2655-2, 2670-3, 3311-3, 3339-2) (Figure 16.54). The presence of these hammerstones in close proximity to the cluster further supported the interpretation of this area as a specific location for reduction activities.

The densest portion of the cluster was located in six test units, N380-381 E631-633, which contained a total of 365 quartz debitage artifacts. The counts dropped off in surrounding units, but were likely associated with this main cluster. In terms of size grade, the cluster was dominated by artifacts of size grades 1 and 2 (84 percent), representing smaller sized debitage that suggested the location as an area of tool finishing or maintenance (Table 16.6). This location also contained some larger pieces of debitage of size grades 5 and 6, and although these were only a small percentage of the whole, this presence indicated that a range of reduction activities may have occurred in this location. Other larger pieces of debitage may have been reduced further or were removed for reuse at another time. The size grade breakdown is consistent with the sitewide averages for all lithic debitage.

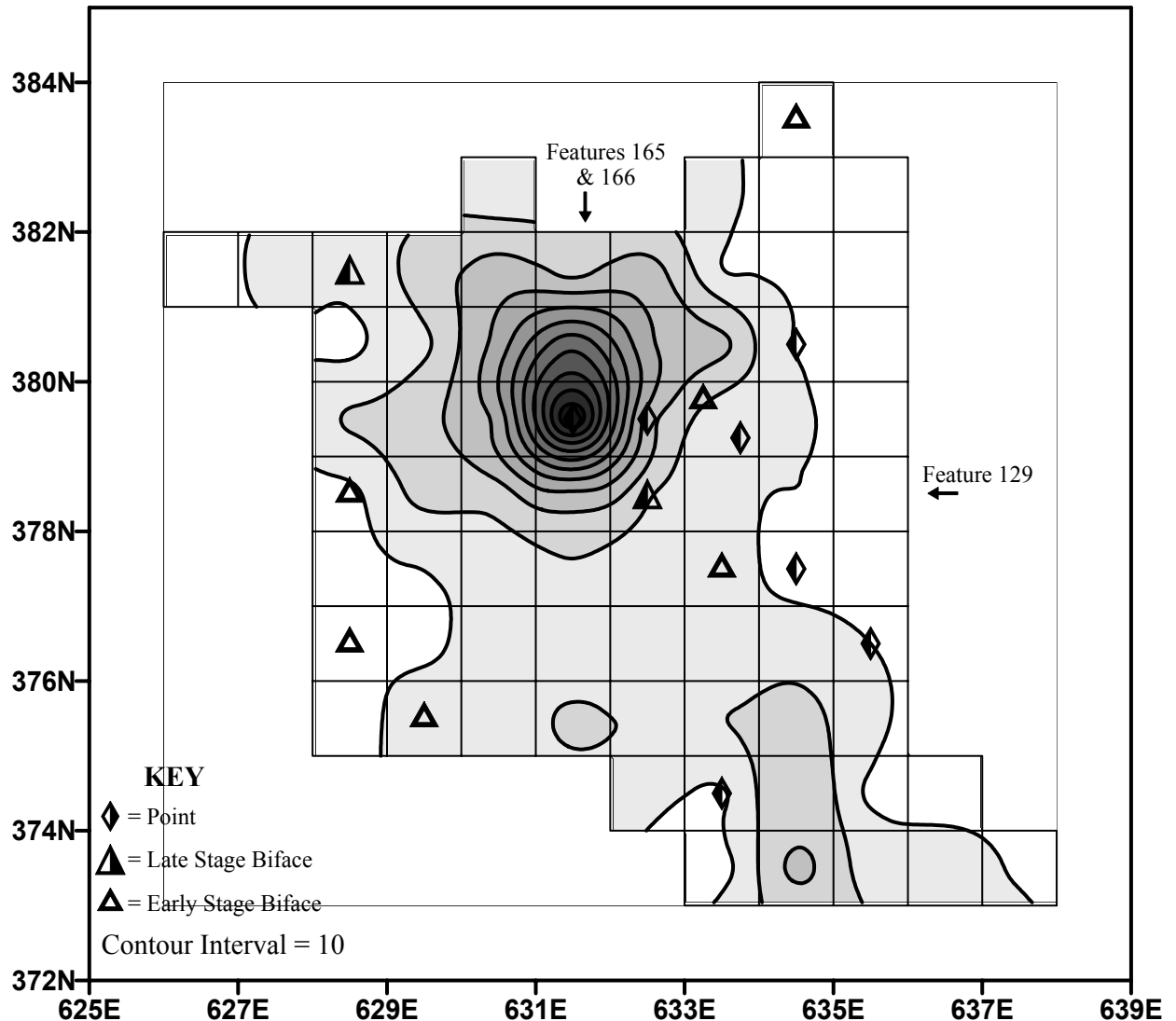


Figure 16.53 Locus H Block 1, Distribution of Quartz Lithic Debitage and Location of Quartz Tools

Six quartz projectile points were located in spatial proximity to the cluster of quartz debitage (Table 16.7). Of these, only one was diagnostic, a Woodland I point (3447-7). The other points consisted of an untyped triangle, an untyped pentagonal, and three other untyped points. Therefore, the cluster was not able to be definitively associated with a specific chronological period, as the Woodland I point types spanned a considerable time frame and the untyped points added no chronological information. However, the cluster demonstrated spatial integrity and remained mostly separated from the cluster of jasper debitage also located within the block (Figure 16.55). Although some overlap occurred between these two clusters, the densest portions of each remained spatially discrete and are considered to represent separate activity areas.

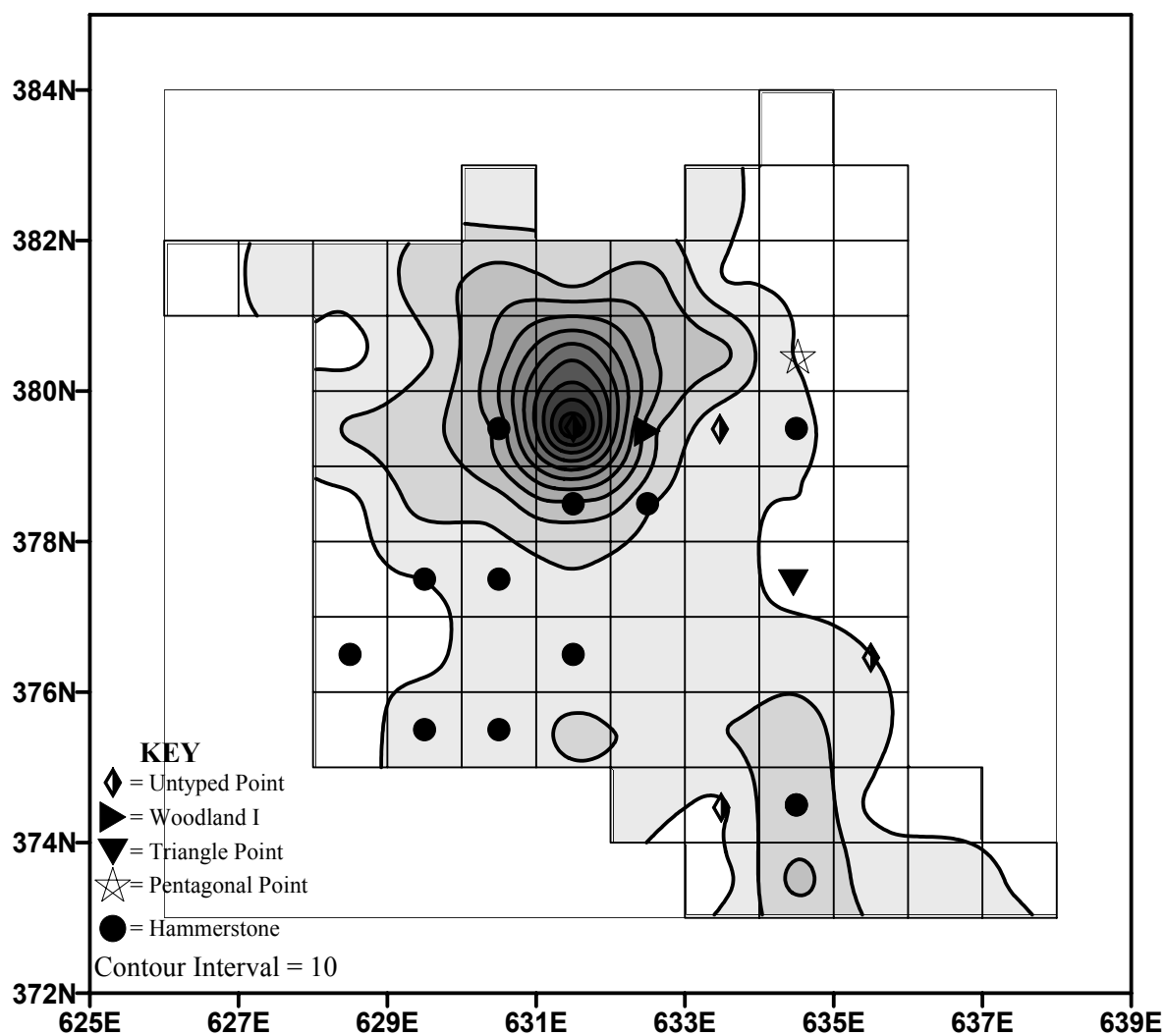


Figure 16.54 Locus H Block 1, Quartz Debitage Cluster, Overlaid with Locations of Hammerstones and Quartz Projectile Points

Table 16.6 Size Grade Breakdown of Quartz Debitage in the Locus H Block 1 Cluster

Size grade	Total Count	Percent
1	75	21
2	233	64
3	36	10
4	9	2
5	3	1
6	9	2
TOTAL	365	100

Table 16.7 Summary of Quartz Projectile Points in Proximity to Locus H Block 1 Quartz Cluster

Catalog number	Typology	Chronology
2427-1	Untyped	Undetermined
2428-1	Triangle	Late Woodland?
2431-2	Untyped	Undetermined
2437-1	Pentagonal	Undetermined
3447-7	Woodland-1	Early-Middle Woodland
3449-1	Untyped	Undetermined

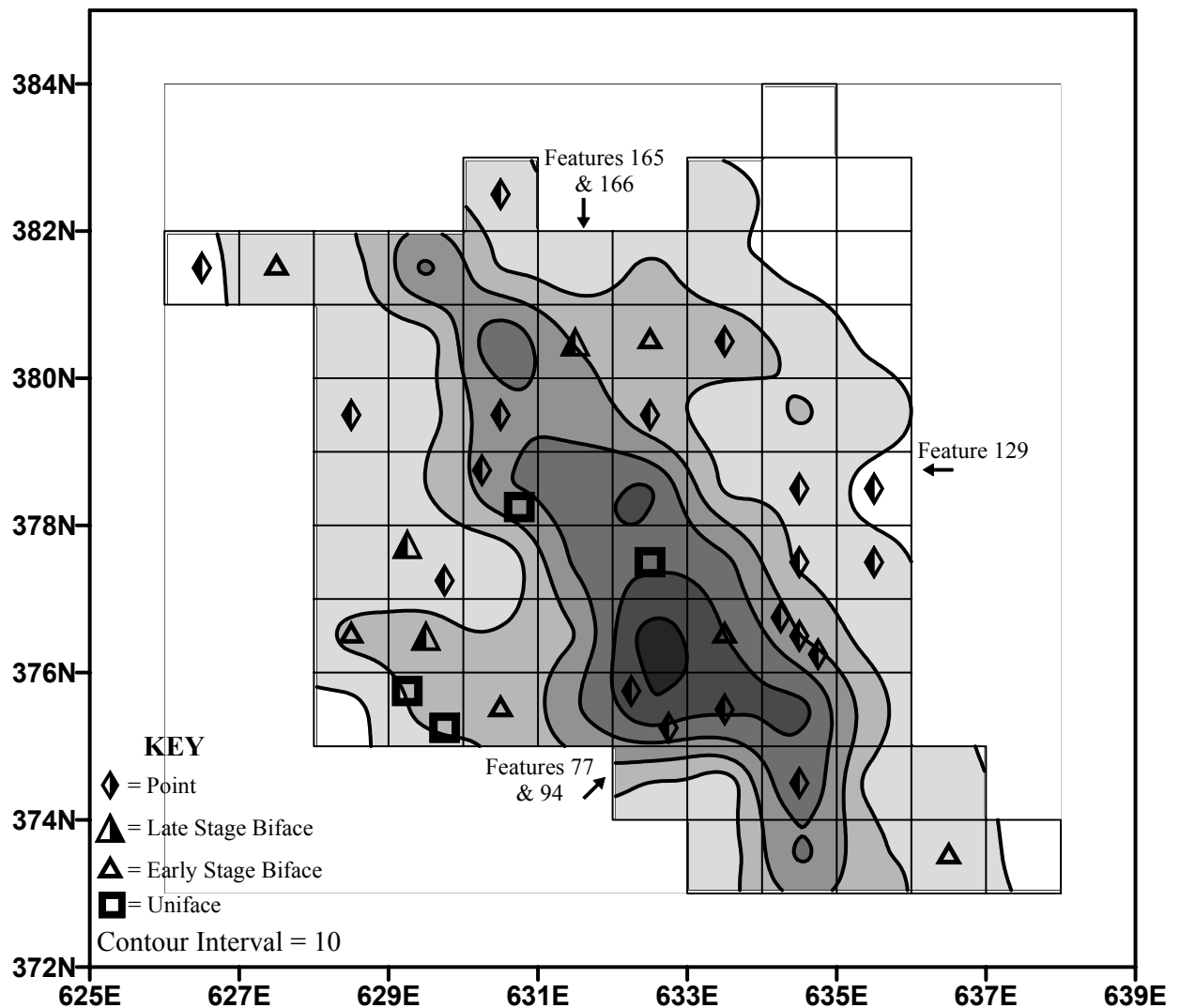


Figure 16.55 Locus H Block 1, Distribution of Jasper Lithic Debitage, Overlaid with Jasper Tools

A plot of jasper debitage within Locus H Block 1 demonstrated that jasper artifacts accounted for the southeastern portion of the second debitage cluster identified in the plot of all debitage in the block (Figure 16.55). This jasper cluster was not as discrete as others identified at the site, stretching across much of the block, which suggested that the material had either been dispersed over a longer period of time or had accumulated from several overlapping episodes. The densest portion of the cluster was found in Units N376-377 E633-634 and Unit N376 E635. These five units yielded a total of 280 jasper artifacts. Jasper debitage counts in the surrounding units decreased, but still remained moderately higher than other areas, making it difficult to establish discrete boundaries for the cluster.

This portion of the block also contained a variety of chipped stone tools made of jasper in and adjacent to the main cluster of debitage. The tools included six early stage and three late stage bifaces, four unifaces, and 19 projectile points. Hammerstones (noted above) were also located within the block, but were located outside and adjacent to the west side of the main cluster (Figure 16.54). The high numbers and variety of tool types located in the area provided further support to the concept that this cluster area represented an accumulation of similar material over a more protracted time, and not a single short-term activity.

The point data were largely inconclusive. Of the 19 points, eight were untyped, one was a Meadowood, and ten were various Woodland I points (Table 16.8). The Meadowood was an indicator of an Early Woodland association, which would seem to be supported by the number of Woodland I points also recovered. However, the date ranges for the various Woodland I point morphologies remain poorly understood and span a considerable period of time.

Table 16.8 Summary of Jasper Projectile Points in Proximity to Locus H Block 1 Jasper Cluster

Catalog Number	Typology	Chronology
827-11	Untyped	Undetermined
838-2	Untyped	Undetermined
1072-1	Woodland I	Early-Middle Woodland
1200-1	Untyped	Undetermined
1451-10	Untyped	Undetermined
2425-1	Woodland I	Early-Middle Woodland
2429-1	Untyped	Undetermined
2430-1	Woodland I	Early-Middle Woodland
2432-1	Woodland I	Early-Middle Woodland
2436-1	Woodland I	Early-Middle Woodland
2670-2	Woodland I	Early-Middle Woodland
2694-1	Untyped	Undetermined
3322-8	Woodland I	Early-Middle Woodland
3325-1	Woodland I	Early-Middle Woodland
3358-2	Meadowood	Early Woodland
3358-3	Woodland I	Early-Middle Woodland
3359-1	Woodland I	Early-Middle Woodland
3393-10	Untyped	Undetermined
3428-1	Untyped	Undetermined

The size grade breakdown for the lithic debitage in the main portion of the cluster was consistent with most of the clusters identified at the site and the sitewide debitage average. The smallest size grades, 1 and 2, accounted for the majority of the debitage, while pieces of larger size grades were noticeably absent (Table 16.9). Again, the lack of large debitage could indicate that reduction activities were largely confined to finishing and tool maintenance, and/or that larger pieces of debitage were reduced further either at the time of reduction or were reused at a later time.

Table 16.9 Size Grade Breakdown of Jasper Debitage Cluster in Locus H Block 1

Size Grade	Total Count	Percent
1	74	26
2	171	61
3	28	10
4	6	2
5	0	0
6	1	<1
TOTAL	280	100

The identification of the jasper cluster was important as it illustrated an artifact cluster suggestive of long term accumulation from repeated behaviors. Although this type of patterning was common for the site as a whole, it was often difficult to illustrate in smaller areas of the site. Accumulation due to site reuse and repeated behaviors was also supported by close proximity of the jasper and quartz clusters within Locus H Block 1. Although the quartz cluster maintained a degree of spatial integrity, it was obvious from artifact distribution maps that a level of overprinting occurred across the site that obscured many of the more discrete clusters present.

The central section of Locus G, within the main block in the Northwest Main Block, also contained a large concentration of jasper debitage that corresponded to cluster four identified in the distribution of all lithic debitage (Figure 16.56). This jasper cluster was larger and more diffuse than some of the other lithic clusters identified. In this part of the block, the jasper was found in two main clusters, to the northwest and in the upper northeast corner. However, the units between the two also maintained relatively high jasper debitage counts, which suggested the possible diffusion of both clusters. Interestingly, the southeast corner of this part of the block noticeably lacked jasper debitage, indicating some separation of activities.

The first cluster of the two jasper clusters was contained mostly within Units N370-372 E642-643 and consisted of 450 jasper debitage artifacts. This cluster had two early stage bifaces and two projectile points within close proximity. A larger variety of jasper chipped stone tools was located throughout the rest of this portion of the block. The high total number of jasper debitage within these units suggested that the cluster maintained a degree of spatial integrity.

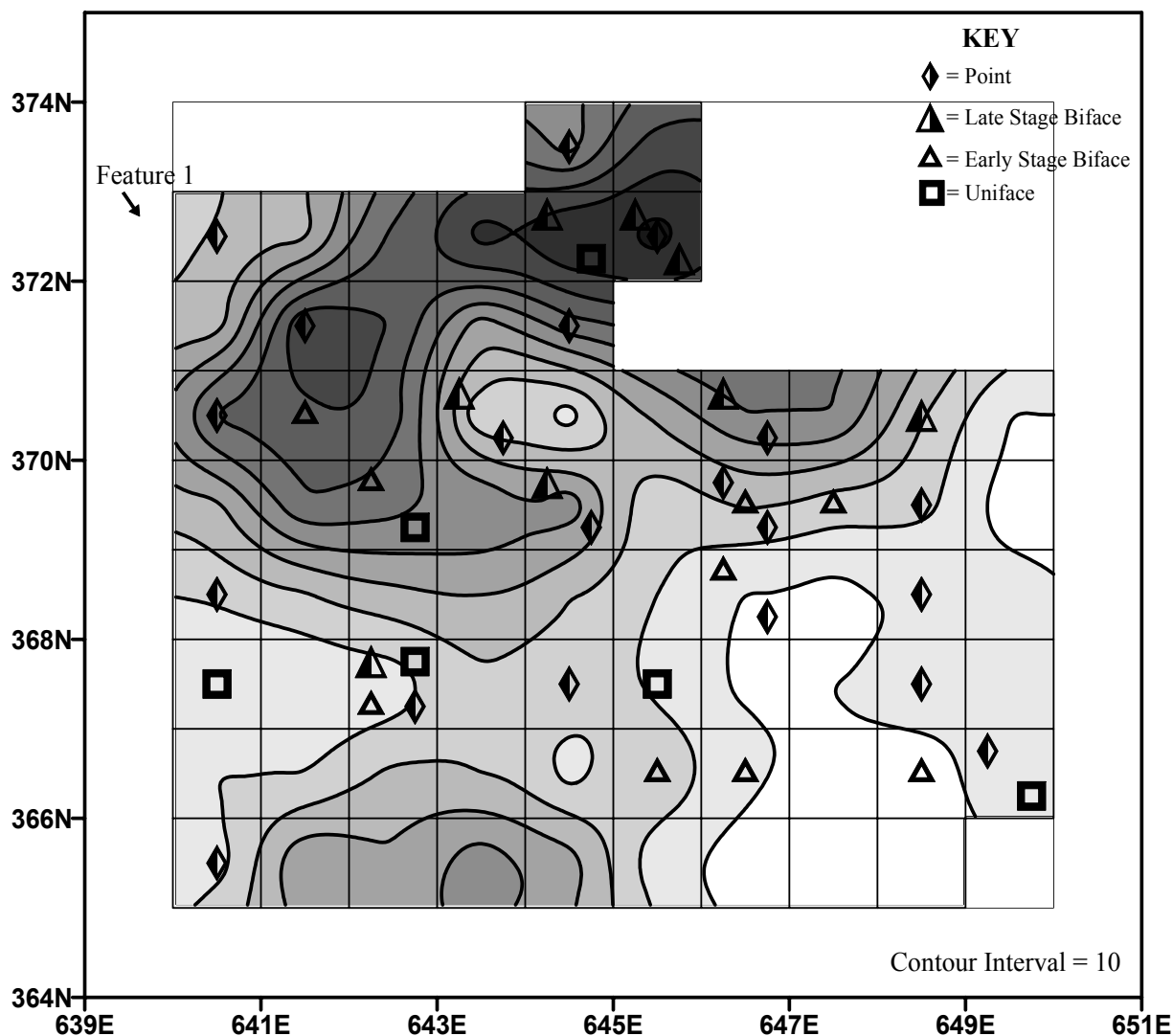


Figure 16.56 Locus G Central Section, Distribution of All Jasper Debitage and Location of Jasper Tools

The size grade breakdown of the debitage within the cluster was consistent with the rest of the site. The overwhelming majority was of the smallest size grades, 1 and 2, and very little material in the cluster represented size grade 4 or greater (Table 16.10). The relatively smaller pieces could be indicative of specific tool finishing or maintenance or indicate that larger pieces were removed for reuse.

The second cluster of jasper debitage within the Locus G central section was identified in Units N373 E644, N372-373 E645, and N373-374 E646. These five test units contained a total of 446 jasper debitage artifacts, as well as a uniface, three late stage bifaces and three points in close proximity. Again, the high frequency of debitage and chipped stone tools of the same material suggested that the cluster had maintained horizontal integrity and that the tools may be associated with the debitage cluster. Size grade analysis of the debitage comprising the cluster similarly suggested that the tools and the debitage could be related. The majority of the debitage

Table 16.10 Size Grade Breakdown of Jasper Debitage in Locus G Central Section Jasper Cluster 1

Size Grade	Total Count	Percent
1	131	29
2	271	60
3	39	9
4	7	2
5	1	<1
6	1	<1
TOTAL	450	100

was composed of the smallest size grades, suggesting tool finishing or maintenance activities (Table 16.11). However, this cluster contained a few more pieces of size grade 3 than many other clusters and could suggest that a wider range of reduction activities occurred in this location. The artifact counts decreased outside the main part of this cluster, but remained high comparable to most of the block, which suggested dispersion of the material had occurred. The points associated with these two jasper lithic clusters provided limited chronological information (Figure 16.57). Cluster 1, to the northwest of the block, contained a Rossville point typically associated with the Early and Middle Woodland periods (Table 16.12). The other two points in proximity to this cluster were untyped. All three points associated with Cluster 2 were untyped as well. The rest of the points in this portion of the block were also inconclusive; eight were untyped, one was an untyped triangle, and four were Woodland I variants which span a considerable time. Only one point was diagnostic; a Brewerton, typically associated with the Late Archaic, was found several meters south of thedebitage clusters.

Table 16.11 Size Grade Breakdown of Jasper Debitage in Locus G Central Section Jasper Cluster 2

Size Grade	Total Count	Percent
1	77	17
2	312	70
3	50	11
4	4	1
5	2	<1
6	1	<1
TOTAL	446	100

The relative proximity and similarity of these two jasper clusters suggested that they could be related and represent a deliberate separation of lithic reduction activity to this portion of the site. The high frequency and small size of thedebitage suggested that activity was limited to tool finishing and maintenance. The clusters also suggested a high degree of horizontal spatial integrity and may represent a specific knapping episode or an accumulation related to a specific occupation. The remainder of this part of the block evidenced a fair amount of jasper interpreted as the result of protracted accumulation from repeated site visits. The absence of jasper in the southeast corner indicated the separation of activity in this location.

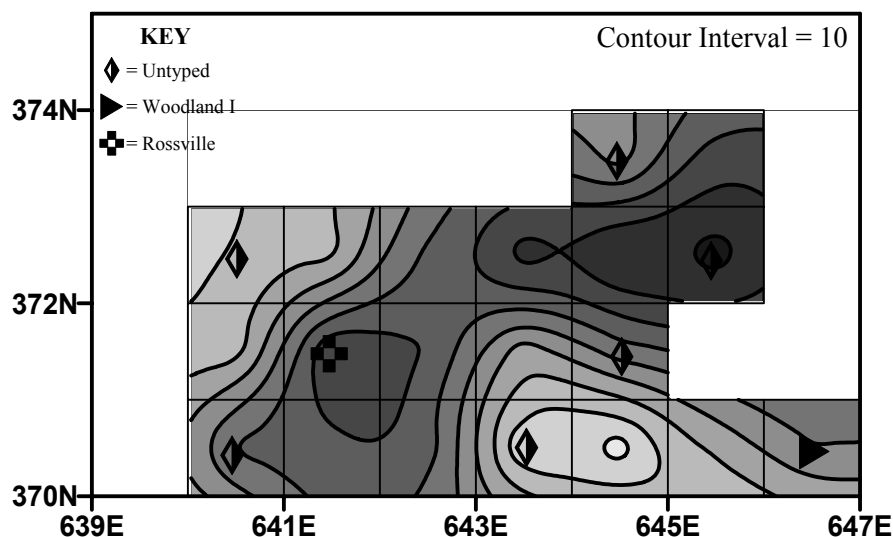


Figure 16.57 Detail of Locus G Central Section, Jasper Debitage Cluster with Jasper Projectile Points

Table 16.12 Summary of Jasper Projectile Points in Proximity to Locus G Central Section Jasper Clusters

Catalog Number	Typology	Chronology
257-1	Untyped	Undetermined
270-1	Untyped	Undetermined
383-1	Woodland I	Early-Middle Woodland
651-1	Rossville	Early-Middle Woodland
2420-1	Untyped	Undetermined
4125-1	Untyped	Undetermined
4191-2	Untyped	Undetermined
4196-5	Untyped	Undetermined

TAS Distribution

The evident TAS features located within the Northwest Main Block dominated the distribution plot of all TAS. The features included were, from southeast to northwest: Features 164, 158/176, 280/281 and 46 in Locus F; and Features 284, 87, 101, 172 and 296 in Locus G. These particular features comprised such high numbers of artifacts that they masked other evident TAS features located within the same block; for instance, Features 55, 230, and 165/166. In addition, some areas of lower TAS counts were evident, most notably near the center of Locus G and the northern portions of Locus H (Figure 16.58). A smaller area of low counts was also present along the eastern edge of Locus G, although this particular area displayed overall low artifact counts (Figure 16.58). In general, the TAS concentrations and features are located along the bluff edge, which may be a meaningful spatial arrangement of these artifacts.

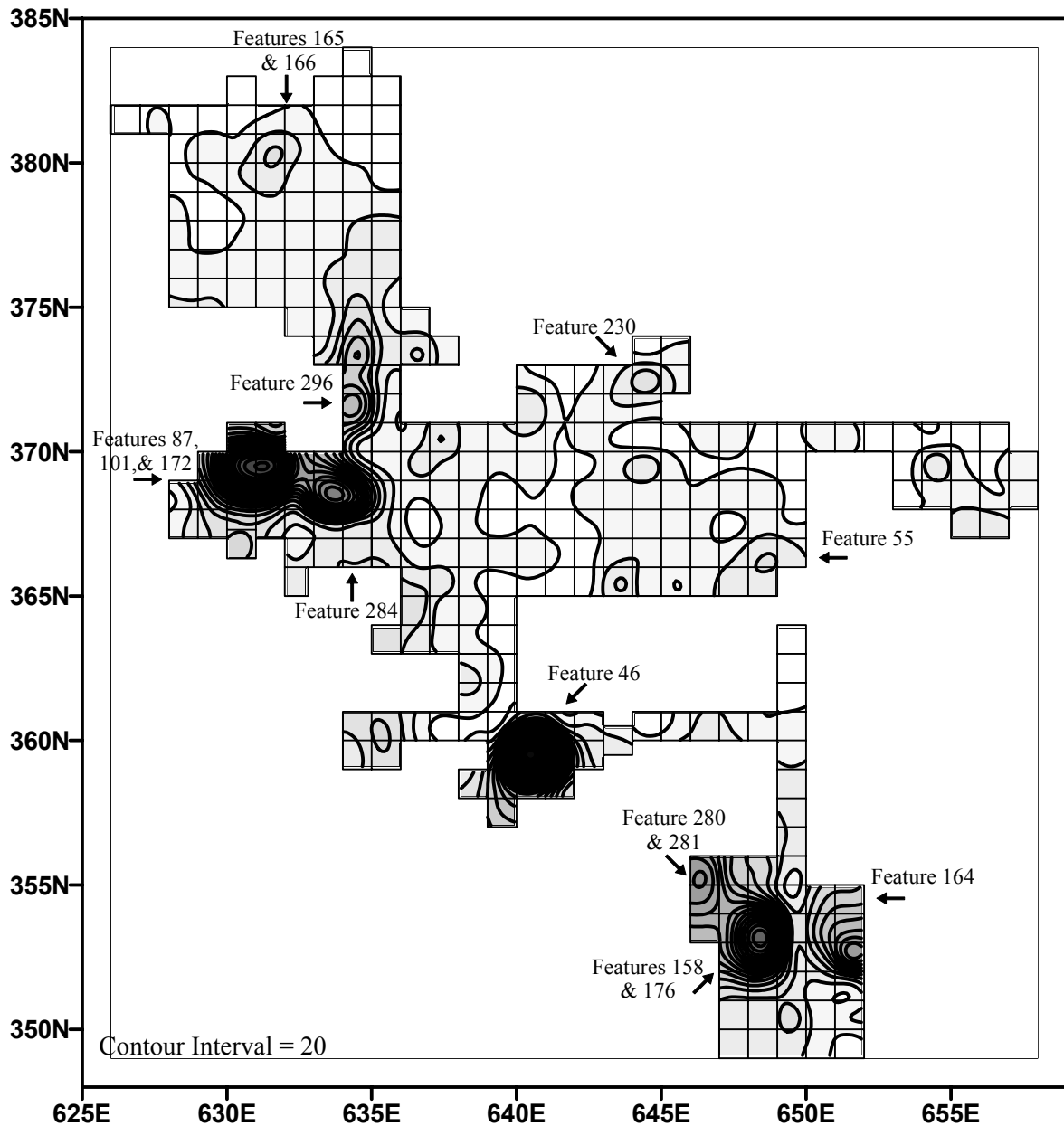


Figure 16.58 Northwest Main Block, Distribution of TAS

In an effort to assess TAS located outside of feature contexts, only those found within the E-horizon were considered. This plot had several results. Most noticeable was that the areas that contained the evident TAS features still exhibited concentrations when the feature artifacts were removed. For example, a cluster noted at the southeast corner of Locus G coincided with the location of Feature 55 (Figure 16.59) while two clusters along the northern boundaries of Locus G were in the same location as Features 296 (west) and 230 (east). This co-occurrence suggested that the artifacts had been dispersed from the delineated spatial boundaries of these features, through either cultural, natural, or a combination of influences. The relative lack of TAS noted in the E-horizon and away from delineated features also suggested that many of the features had maintained spatial integrity. This, in turn, suggested that associated activity areas

may also be present around these features. In addition, it also suggested that much of the TAS recovered from the Northwest Main Block, if not from an evident stone feature, was likely from a basin feature context as possible secondary fill.

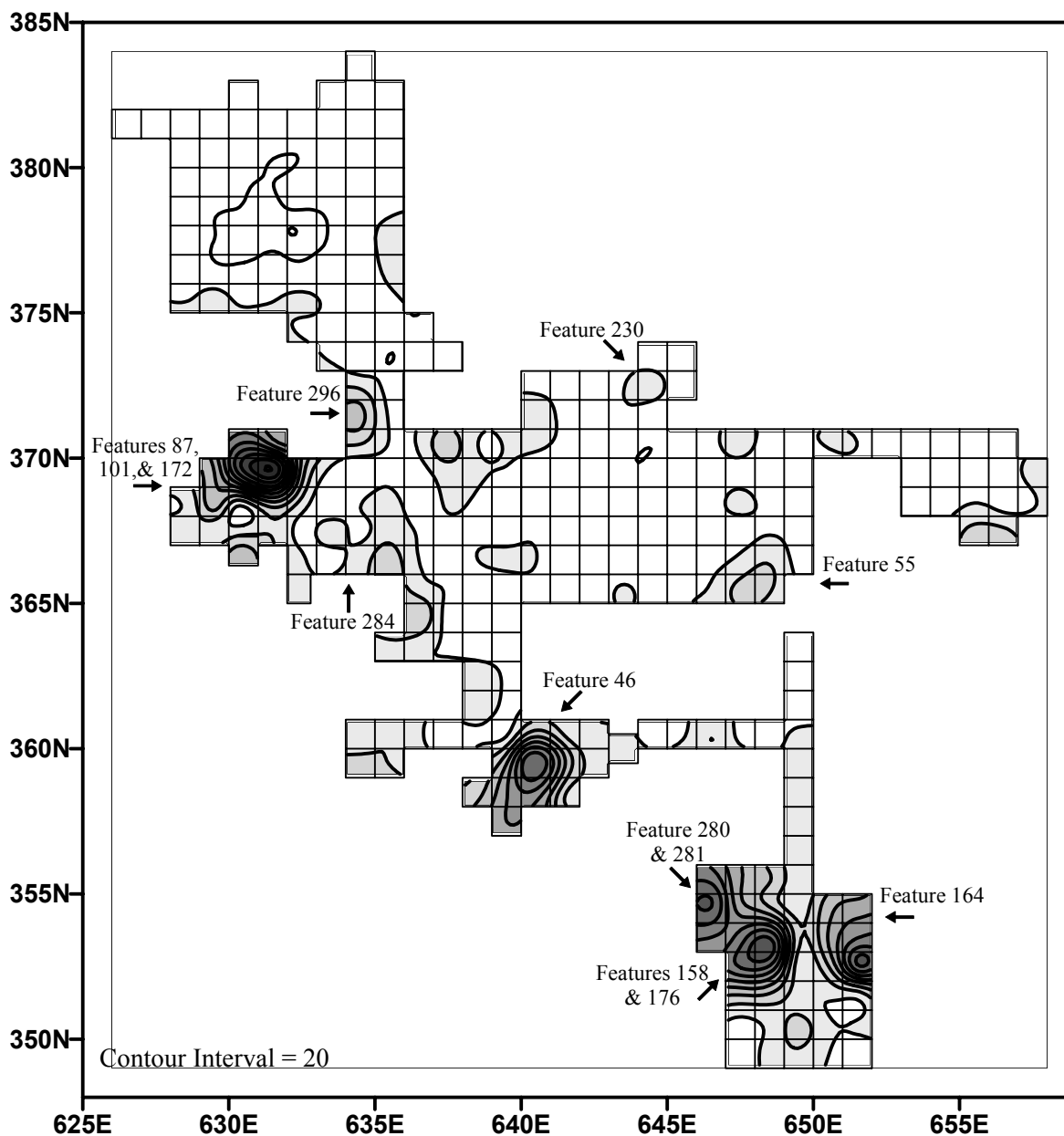


Figure 16.59 Northwest Main Block, Distribution of TAS within the E-horizon

Ceramic Distribution

The distribution plot of all ceramics revealed seven cluster areas with a degree of spatial separation (Figure 16.60). The most prominent cluster was located in the northwest corner of Locus G and in the vicinity of Feature 169.

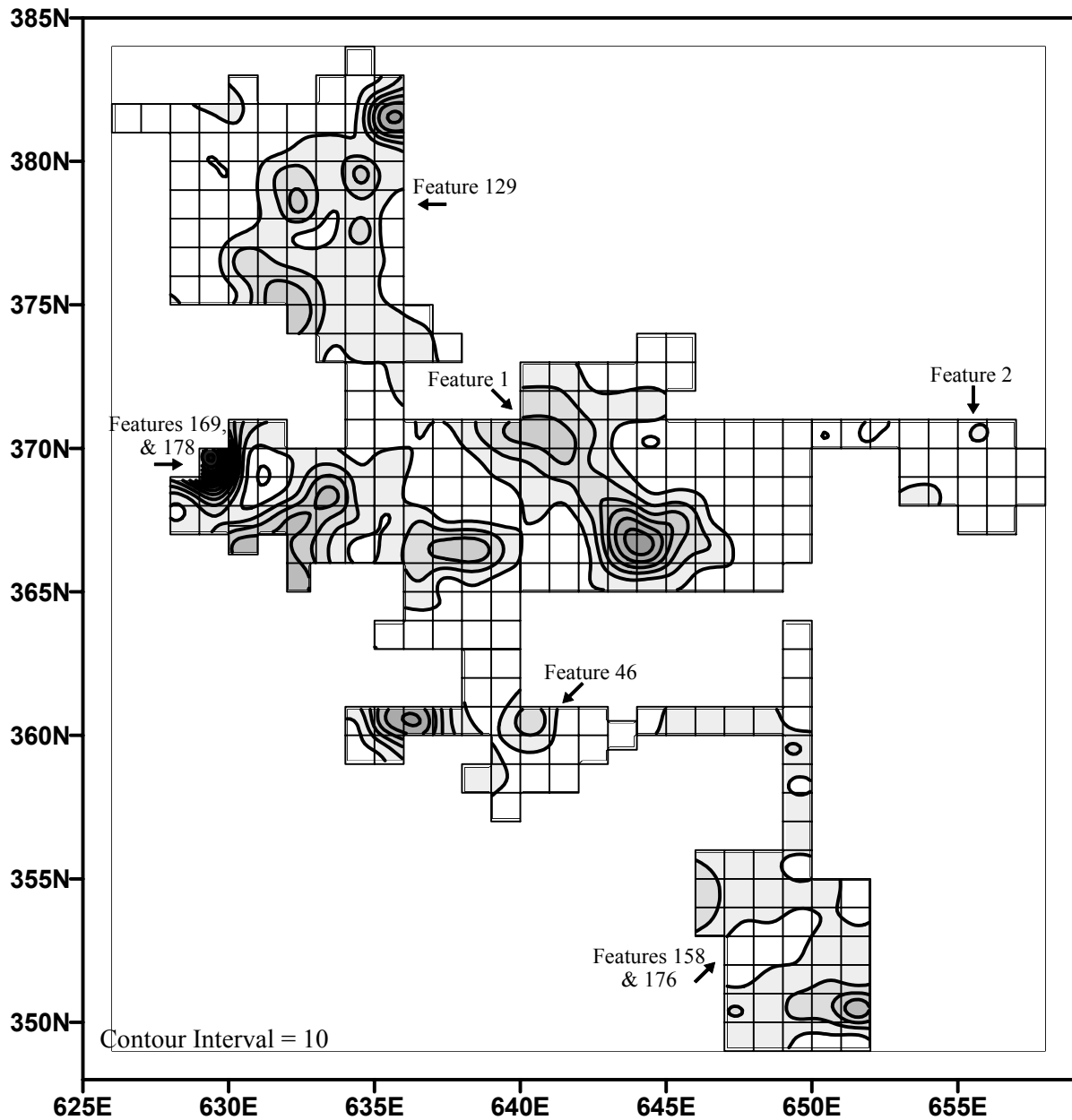


Figure 16.60 Northwest Main Block, Distribution of All Ceramics

Two other clusters of lower density were located to the east of this cluster. The next largest cluster was located in the center of Locus G, and consisted of two areas of differing intensity that may be divided into two distinct clusters. The southwest corner of Locus G contained another ceramic cluster that was located in area devoid of delineated features. The northern part of Locus H also produced an identifiable ceramic cluster, while the rest of Locus H was characterized by a more diffuse spread of ceramics. The southern part of Locus F was also characterized by a more diffuse spread of ceramics. Perhaps just as interesting were the several areas that were noticeably lacking ceramics: the eastern half of Locus G, the northwestern corner of Locus H, and the area between Loci F and G. The variations of ceramic clusters noted within the block suggested differential use and the potential for identifying associated activity areas

linked by ceramic types. The ceramic distributions will be more fully explored below. The level of clustering noted in the general plot suggested that spatial integrity was still present within the Northwest Main Block.

The plot of all Marcey Creek ceramics within the Northwest Main Block revealed several spatially discrete clusters (Figure 16.61). The densest cluster was located along the west edge of Locus G, in the vicinity of basin Feature 169 and evident ceramic cluster of Marcey Creek, Feature 178.

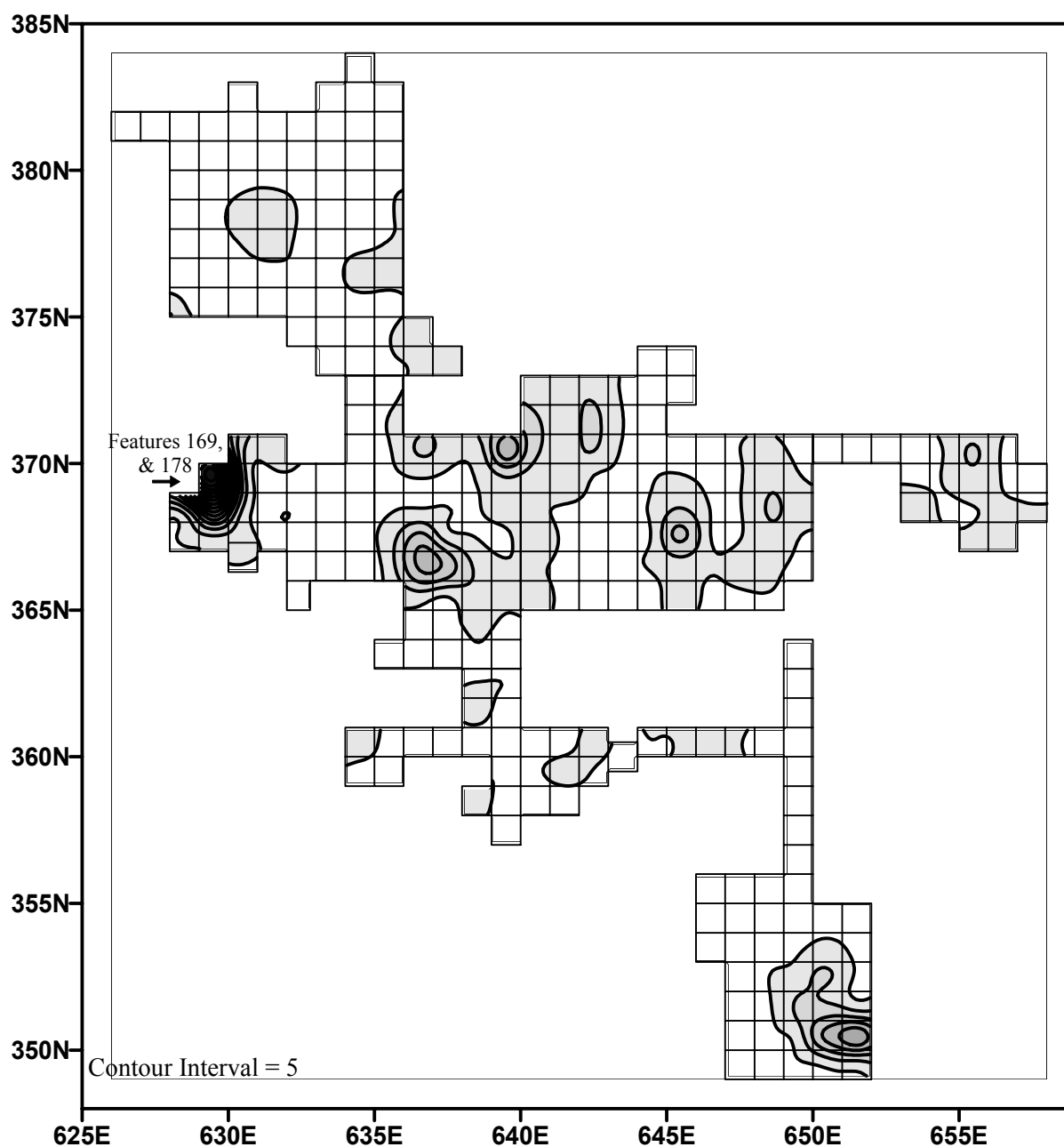


Figure 16.61 Northwest Main Block, Distribution of All Marcey Creek Ceramics

A second cluster of Marcey Creek ceramics was located in the center of Locus G; this was a large and diffuse cluster that could almost be separated between its southern and northern portions. Several meters east of this cluster was another large diffuse cluster. South of this latter cluster, in the southeast corner of Locus F, another large, dense cluster was identified. A final cluster of Marcey Creek ceramics was located on the east edge of the Northwest Main Block in the location of Feature 2. Several smaller areas also were identified along the trench of Locus F outside of Feature 46 and in the central part of Locus H in the vicinity of Feature 129. The degree of separation between these clusters suggested that they maintained spatial integrity. The high number of clusters was also important and illustrated the intensity of use of the site during the Early Woodland period. These clusters may also help to establish patterns of differential site use during the time that Marcey Creek ceramics were being used and could associate with several of the lithic clusters noted above.

Vessel Lot MA01 consisted of 63 sherds, found primarily in the southeast corner of Locus F (Figure 16.62). An additional three sherds were recovered northwest of the main cluster, in and adjacent to Feature 46. The main cluster of Vessel Lot MA01 was recovered from eight contiguous units and four refit groups were identified. These large refit groups were found within and between units and even occurred between units that were not directly contiguous. The high number of total sherds and high refit percentage suggested a high level of spatial integrity for the lot. When overlaid on the plot of all Marcey Creek ceramics, the location of Vessel Lot MA01 corresponded closely to the cluster identified in the southeast corner of the block, suggesting that the lot represented a significant portion of the cluster. The three additional sherds found outside the main cluster also corresponded to another small, ephemeral cluster of ceramics identified in the Marcey Creek vessel plot. Vessel Lot MA01 displayed a high degree of integrity despite the three outlying sherds. These other sherds may represent reuse behavior or the trampling of artifacts across the former site surface.

Fifty sherds comprised Vessel Lot MA02, which was mostly found clustered in the northwest corner of Locus G (Figure 16.62). Six of the sherds were located elsewhere in the large block: four in Locus H in and around Feature 129 and two more in separate locations in Locus G. A total of six different refit groups were identified for Vessel Lot MA02 and included 32 of the sherds. Multiple refit groups were found within and between several units of the main cluster of the Vessel Lot. In addition, Refit Group C produced direct mends between the main cluster of the lot and the sherds found in Locus H and easternmost Locus G. These direct cross-mends demonstrated clearly the level to which vessels could disperse and be found at the site. When overlaid on the plot of all Marcey Creek ceramics for the quadrant, the locations of Vessel Lot MA02 correspond to several of the clusters identified in computer plotting. The five contiguous units in the west of Locus G where the majority of Vessel Lot MA02 was recovered matched the densest cluster of Marcey Creek in the plot. The sherds found in Locus H were situated in the smaller cluster identified in that portion of the quadrant. The remaining two sherds were located within the large cluster found in the center of Locus G. Vessel Lot MA02, therefore, provided a direct association between several of the main clusters as identified in the computer plot.

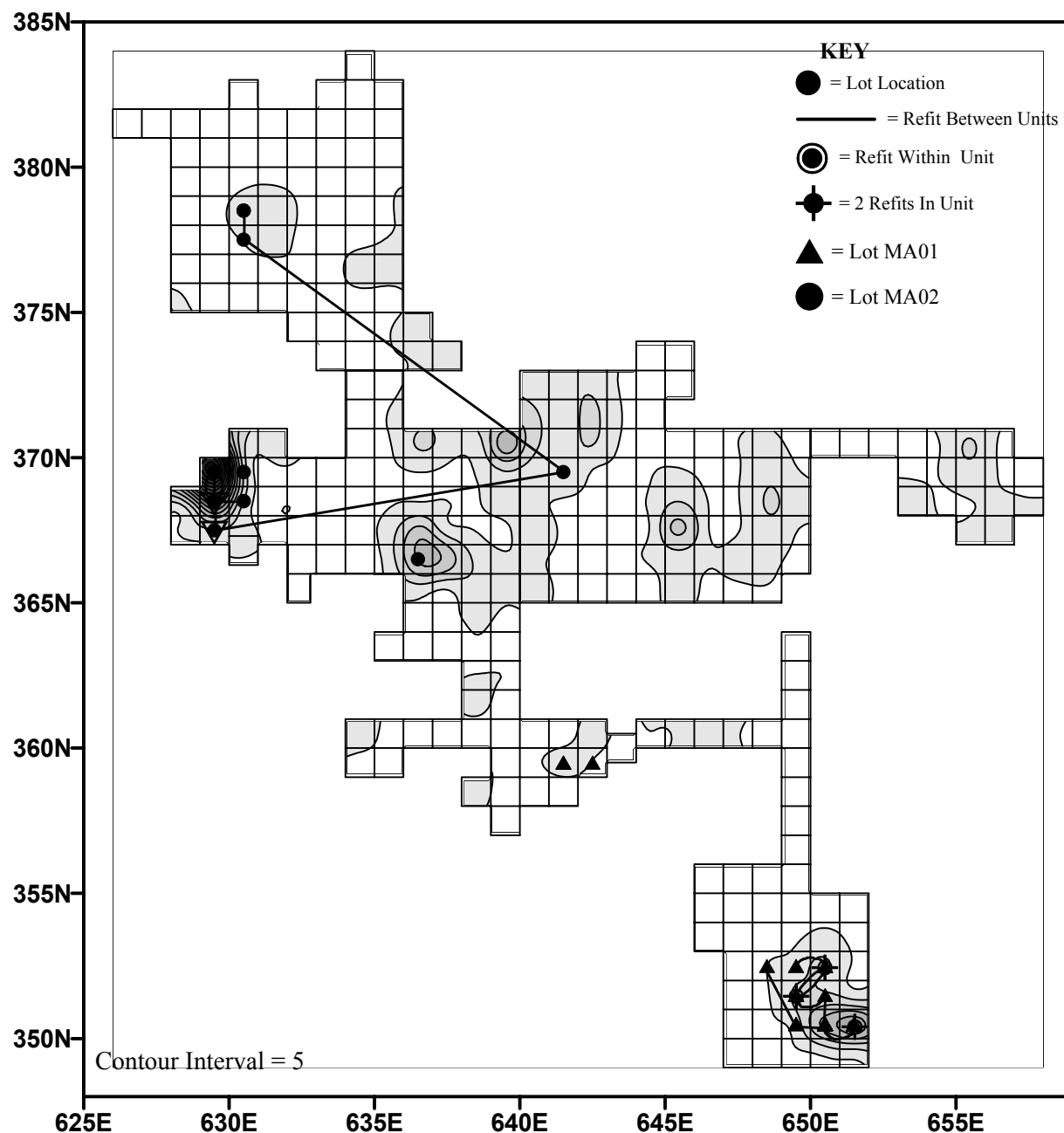


Figure 16.62 Northwest Main Block Locations of Vessel Lots MA01 and MA02, Overlaid on Distribution of All Marcey Creek Ceramics

In terms of stratigraphy, Vessel Lot MA02 was very interesting. Six sherds were recovered from the Ao-horizon, while 20 were found in the E-horizon. The remaining 24 sherds were found in several different features, including basin Features 129, 169, 180, and 313; TAS Features 101 and 172; and a ceramic concentration, Feature 178. In fact, several of these features were linked by the identification of direct cross-mends between sherds found there. These included Refit Group C (Features 101, 129, 172, 178, and 313) and Refit Group F (Features 178 and 180). Overall, Vessel Lot MA02 evidenced a high degree of spatial integrity

despite the six outlying sherds. The movement of these sherds might represent reuse behavior or site cleaning activities.

Comparison of the locations of Vessel Lots MA01 and MA02 also illustrated important patterns. The two lots both showed areas of dense clustering with several outlying sherds (Figure 16.62). In the case of Vessel Lot MA02, these outlying sherds were as far as 11-12 m away, while in Vessel Lot MA01 they were found within 9 m. Despite the wide dispersion of each of these lots, they remained completely separated from each other. Vessel Lot MA01 accounted for much of the large cluster found in the southeast corner of the quadrant, while Vessel Lot MA02 contributed to the large cluster along the west edge. Both also incorporated secondary clusters, but not the same ones, thus linking areas within the quadrant.

Vessel Lot MA04 consisted of seven sherds that were found in three separate areas of Locus G (Figure 16.63). Direct cross-mends were identified for the two sherds recovered in the west part of Locus G. These sherds were found adjacent to the dense cluster of Marcey Creek ceramics identified in the plot of all Marcey Creek sherds. The next sherd was found along the northern edge of Locus G and just north of another large cluster of Marcey Creek ceramics. The remaining four sherds were recovered from three contiguous units located at the eastern edge of Locus G and were contained within a lighter cluster of Marcey Creek ceramics. The relatively wide dispersion of this lot suggested less spatial integrity for the lot. Interestingly, when viewed in terms of stratigraphy, only three of the sherds were recovered from E-horizon contexts: the two sherds furthest to the west and one of the sherds found in Unit N368 E657. The other four sherds were recovered from contexts noted as disturbed or from the plow zone in the eastern part of the quadrant. Finding the sherds in disturbed contexts supported the idea that the position of the vessel had been altered.

A total of 23 sherds comprised Vessel Lot MA05, which was found in eight contiguous units in the north-central area of Locus G (Figure 16.63). Direct cross-mends were identified for sherds contained within the same unit, but not for sherds between units. The locations of Vessel Lot MA05 sherds corresponded closely to a large cluster of Marcey Creek ceramics that stretched from the north to the south across the center of Locus G. The close clustering of Vessel Lot MA05 suggested a high level of spatial integrity. One sherd was recovered from the Ao-horizon, while the rest of the sherds were found in the E-horizon or feature contexts that included Features 1 and 249. The juxtaposition of the vessel lot locations with the large cluster suggested the integrity of this cluster and the possibility of defining associated activity areas.

Comparison of Vessel Lots MA04 and MA05 provided important information for spatial relations in the Northwest Main Block. The two lots remained separated from each other. Vessel Lot MA04 exhibited a level of disturbance, both in its widely scattered locations and stratigraphic distribution. Vessel Lot MA05, in contrast, was tightly clustered and recovered from mostly below the A-horizon, demonstrating more spatial integrity. Both lots were located in and around clusters of Marcey Creek ceramics and suggested the differing levels of integrity present within the block excavation.

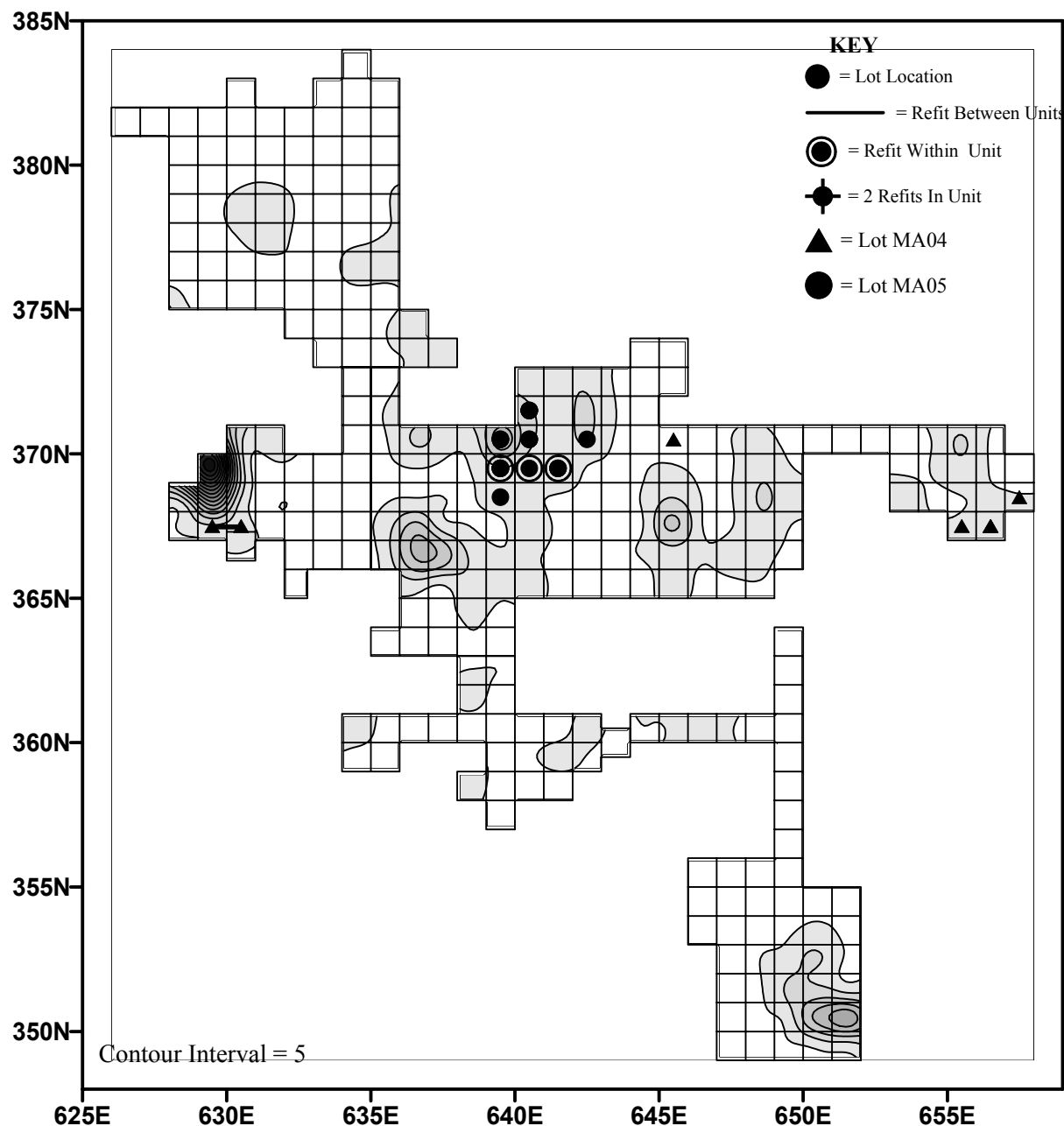


Figure 16.63 Northwest Main Block Locations of Vessel Lots MA04 and MA05, Overlaid on Distribution of All Marcey Creek Ceramics

Vessel Lot MA07 was also recovered from the central portion of Locus G. It consisted of 18 sherds found in ten units that comprised three separate groupings (Figure 16.64). Direct cross-mends were identified for three sherds found in two contiguous units. The locations of sherds from Vessel Lot MA07 corresponded to the large cluster of Marcey Creek ceramics that stretched from the north to south of the center of Locus G. More specifically, Vessel Lot MA07 comprised two dense areas within the larger cluster. The first grouping of Vessel Lot MA07 was found in four test units centered over a dense cluster. The next group occurred 1 m to the east within a

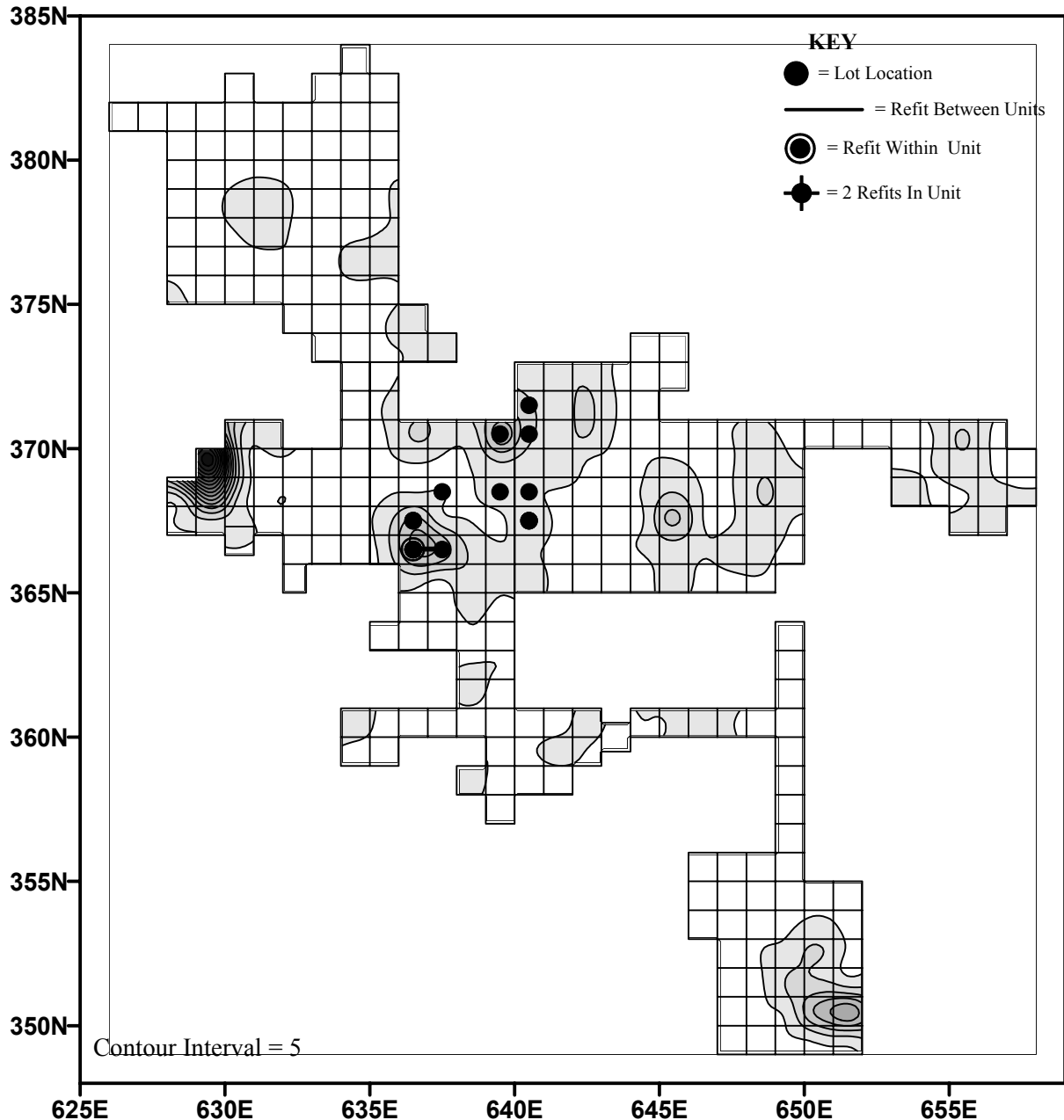


Figure 16.64 Northwest Main Block Locations of Vessel Lot MA07, Overlaid on Distribution of All Marcey Creek Ceramics

lower density area of the main cluster. The final grouping was found 1 m north of the second group, and corresponded with the location of another dense spot within the large cluster. Although, there was some separation between the locations of Vessel Lot MA07, the lot demonstrated spatial integrity. Sherds were recovered from the Ao and E-horizons, as well as from Feature 279. Vessel Lot MA07 was found in the same general area as Vessel Lot MA05 and suggested that this location was an intense area of Marcey Creek use. The degree of spatial integrity of both these lots further suggested the integrity of the larger cluster and the association of this area with Marcey Creek.

Wolfe Neck ceramics were found with less overall frequency than either Marcey Creek or Clay Tempered ceramics, but contributed a significant amount to the overall ceramic assemblage. For the plot of Wolfe Neck ceramics, the contour interval had to be reduced from five to two artifacts to identify more subtle patterns. The resulting plot for the Northwest Main Block produced several discrete ceramic clusters (Figure 16.65). The densest cluster was located near the western edge of Locus G and covered a large horizontal area that contained two extremely dense concentrations. A second cluster was located at the southern end of Locus H and the northern part of Locus G and appears to be connected, despite the unexcavated units between the areas. Two more clusters of Wolfe Neck ceramics were identified: one in the trench portion of Locus F and the other in the southeast corner of Locus G extending to the northern tip of Locus F. Several less dense, secondary clusters were also evident from the plot. The degree of clustering for the Wolfe Neck ceramics was important as it suggested spatial integrity and the possibility of isolating areas associated with Wolfe Neck ceramics. Although found with less frequency than the other wares at the site, Wolfe Neck ceramics provided an important link between the earlier Early Woodland wares and the Middle Woodland.

Vessel Lot W2 consisted of 20 sherds found in 11 test units (Figure 16.66) that comprised three separated clusters within Loci F and G. Direct cross-mends were obtained for several sherds both within and between contiguous units. No cross-mends were identified between the separate clusters. When compared to the plot of all Wolfe Neck ceramics in the quadrant, Vessel Lot W2 corresponded closely with several small secondary clusters identified, but not with the two large clusters. The lot evidenced moderate spatial integrity by the cross-mends obtained and the groupings of the units. In addition, only one sherd was recovered from the Ao-horizon, two in Feature 275, and the rest in the E-horizon. However, the distance between the groupings of units was indicative of less spatial integrity and could relate to deliberate reuse or recycling of the vessel, or to site cleaning. The correspondence with the smaller identified clusters suggested that these areas were related and the configuration of the test units may have interrupted a larger cluster. It was also interesting that Vessel Lot W2 remained entirely separated from the main clusters of Wolfe Neck ceramics identified within the Northwest Main Block.

Mockley ceramics were also recovered at Hickory Bluff in smaller numbers than the more dominant Clay Tempered and Marcey Creek ceramics. The presence of Mockley ceramics was important as it demonstrated the presence of a traditional Middle Woodland ware. The small numbers of Mockley ceramics required a reduction of the contour interval to one artifact. The resulting plot revealed two significant and several small, secondary clusters of Mockley ceramics. The densest cluster was found in the northwest corner of Locus F Part 1 (Figure 16.67). It encompassed several test units and displayed a good degree of spatial separation. The other cluster was not as dense or well defined. It was located in the northern edge of Locus H and extended over several units. The secondary clusters were spread throughout the center of Locus G and at the northern edge of Locus F Part 2. These smaller clusters were comprised of only a few artifacts but their presence was important for assessing the locations of the Mockley Vessel Lots identified in the assemblage. In general, the low numbers in these clusters suggested a higher degree of dispersion.

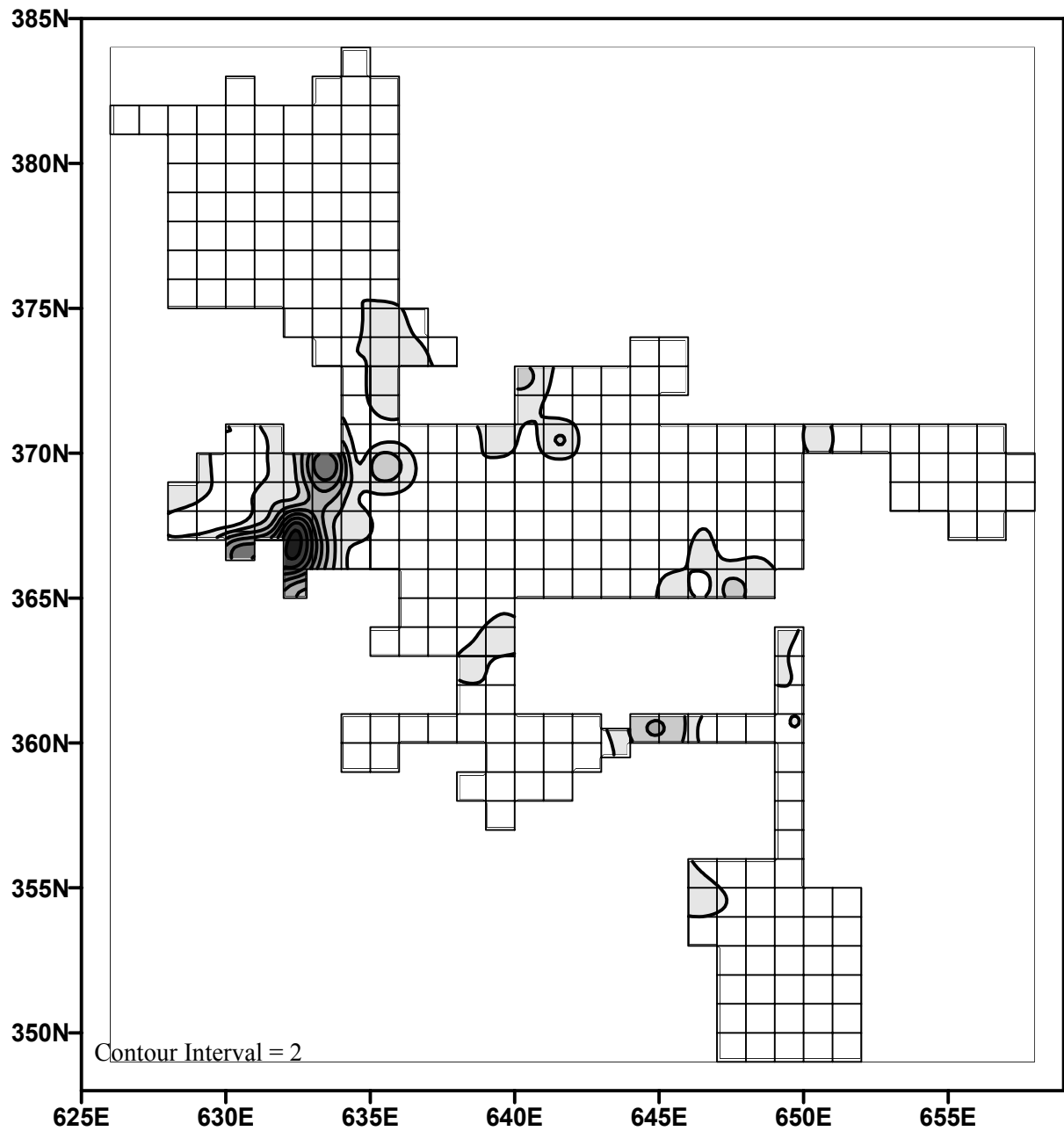
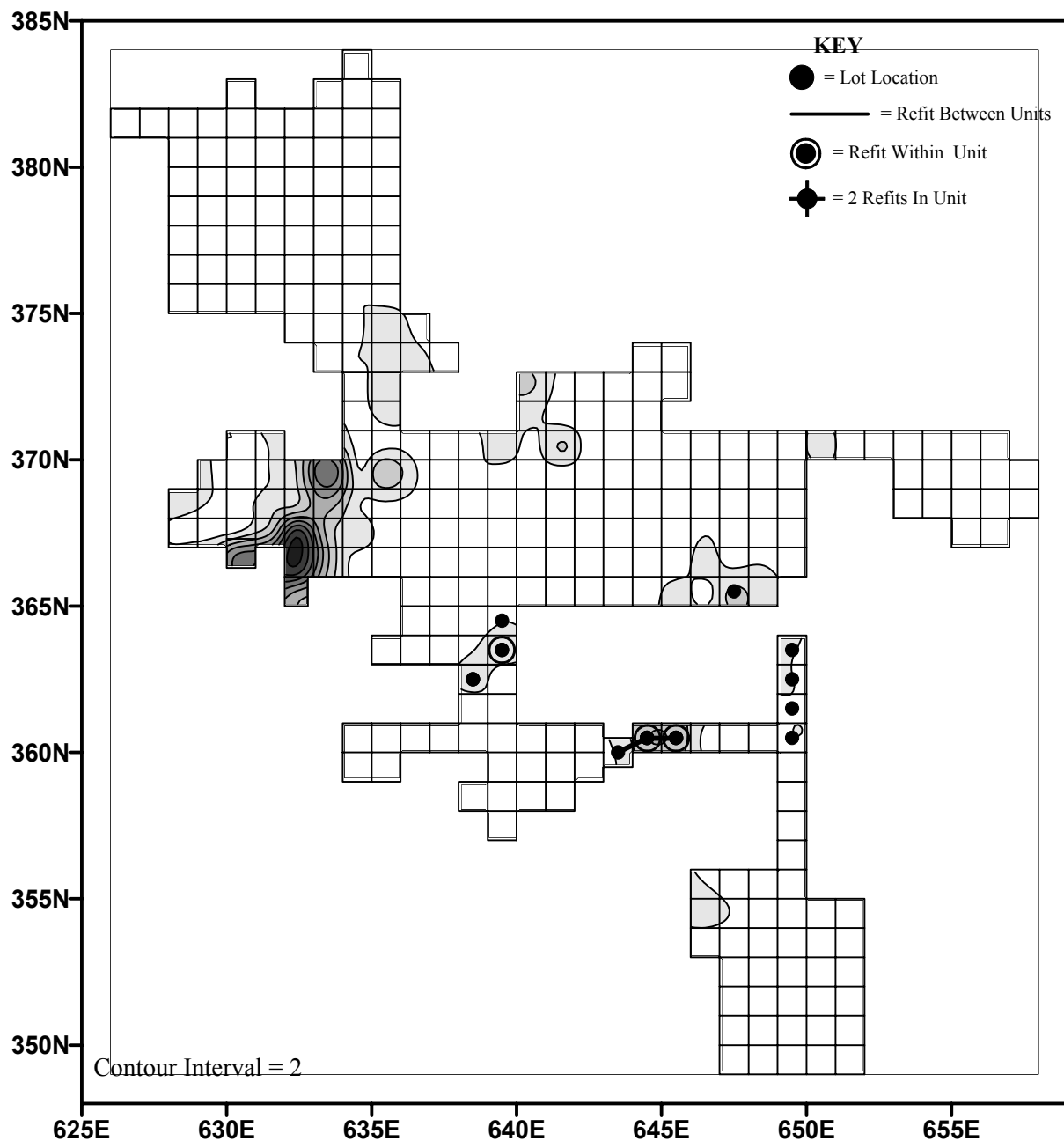


Figure 16.65 Northwest Main Block, Distribution of all Wolfe Neck Ceramics



**Figure 16.66 Northwest Main Block Locations of Vessel Lot W2,
Overlaid on Distribution of All Wolfe Neck Ceramics**

The clusters of Mockley ceramics were spatially separated across the Northwest Main Block (Figure 16.67). The locations of sherds from Vessel Lot MO2 were similarly widespread (Figure 16.68). The lot contained 18 sherds that were recovered from 15 units, found throughout the Northwest Main Block. Refit groups were identified within and between several test units. However, cross-mends were not obtained between the different areas that contained Vessel Lot MO2. The locations of sherds from Vessel Lot MO2 matched the clusters identified in the plot of all Mockley ceramics. Four sherds were recovered from the cluster of Mockley ceramics in the northwest corner of Locus F Part 1, while three more were found in the smaller cluster in

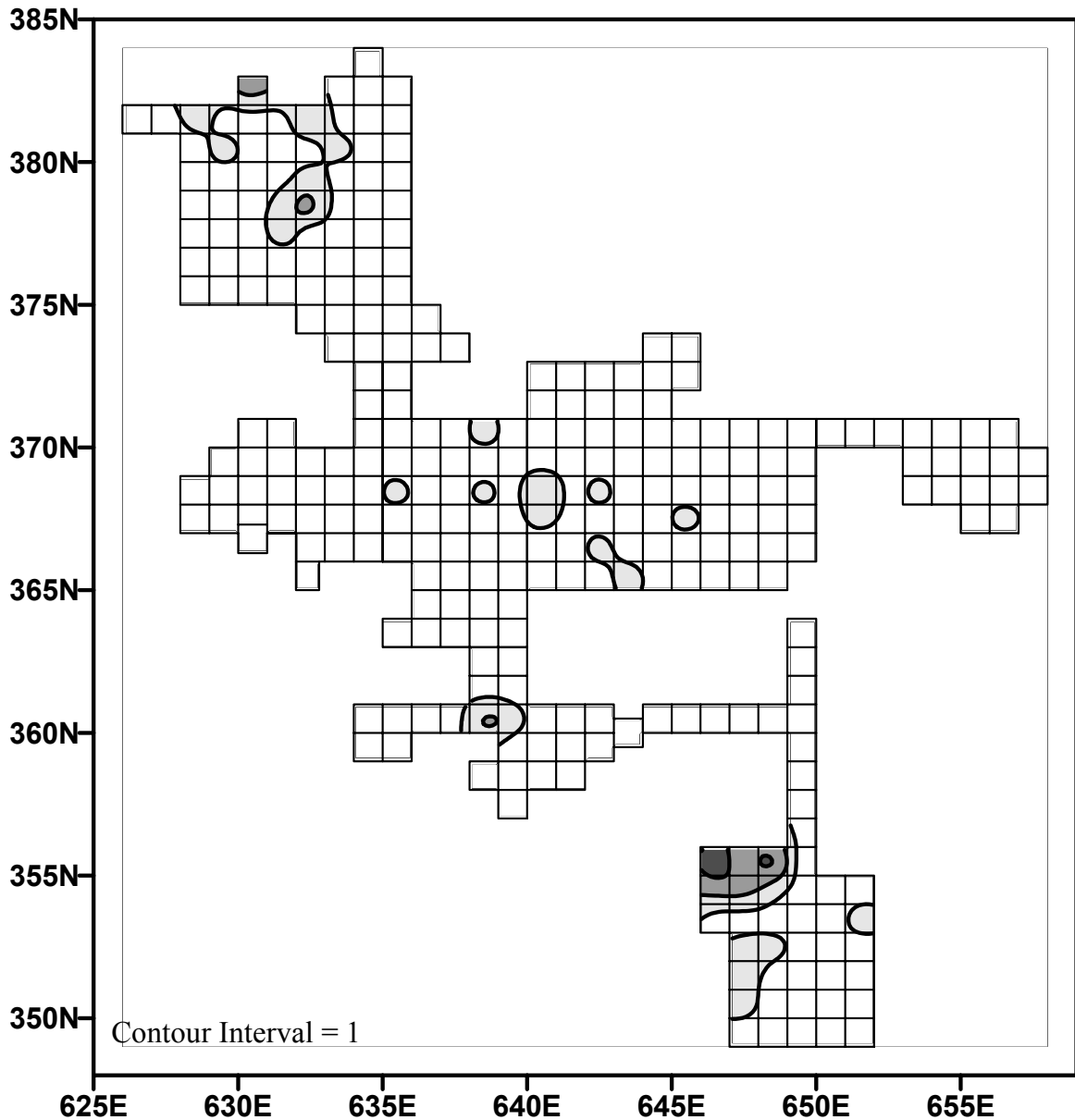


Figure 16.67 Northwest Main Block, Distribution of All Mockley Ceramics

Locus F Part 2. The largest cluster of Vessel Lot MO2 sherds was located in the northern portions of Locus H and contained cross-mends between separated units. The remainder of the lot was recovered from isolated units within the main excavation block as well as from an unincorporated test excavation. Given the overall low frequency of Mockley ceramics, it was not unexpected that the lot locations would correspond to the identified clusters. However, the horizontal distances between the locations of sherds from Vessel Lot MO2 suggested a lack of spatial integrity for both the lot and the identified clusters. Eight of the 18 sherds were recovered within the Ao or redeposited strata. Five sherds were found in the E-horizon, while Feature 129 contained four sherds and Feature 265 contained one sherd.

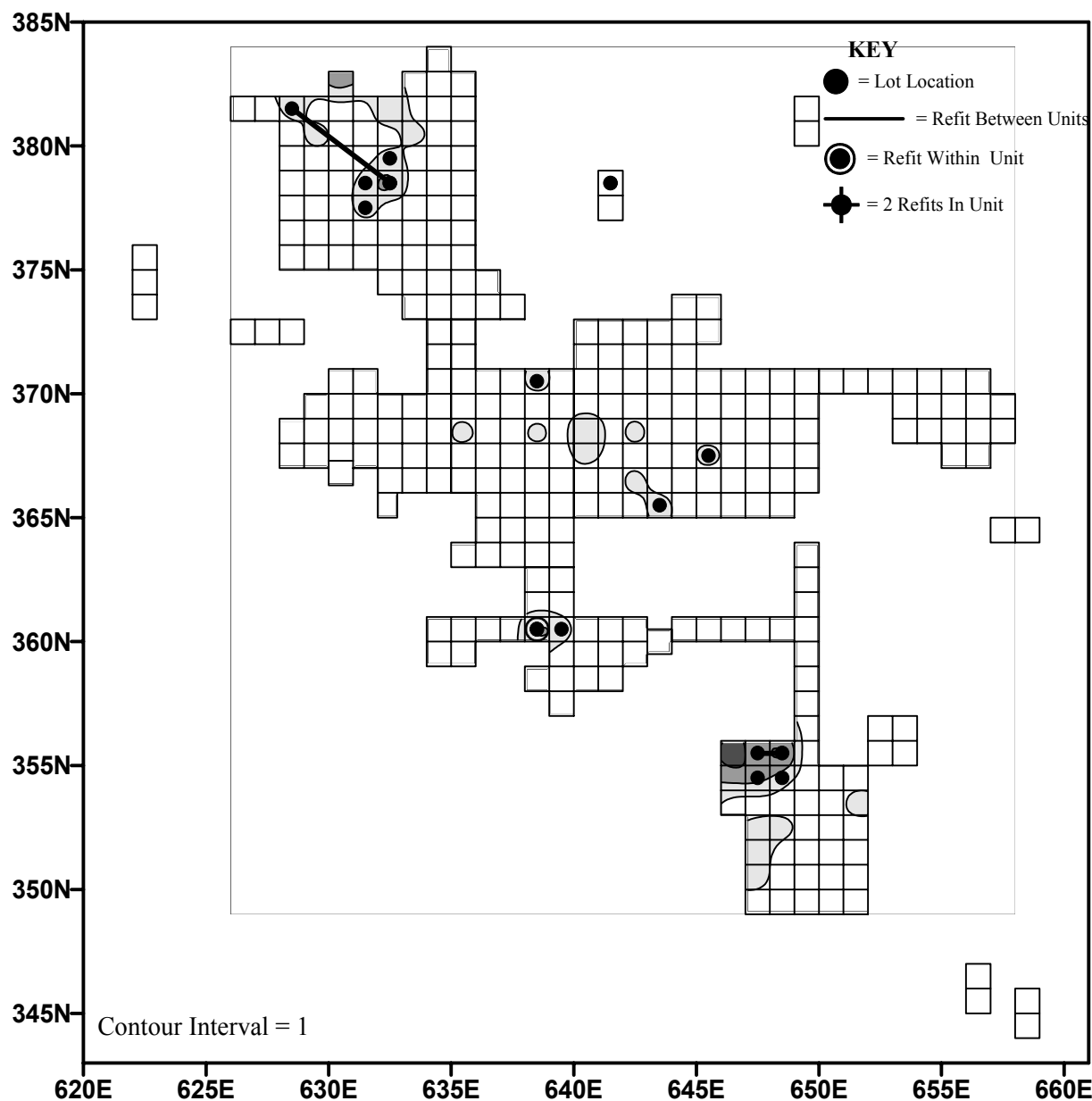


Figure 16.68 Northwest Main Block Location of Vessel Lot MO2, Overlaid on Distribution of All Mockley Ceramics

Vessel Lot MO4 consisted of 15 sherds recovered from eight units within the Northwest Main Block (Figure 16.69). The majority of the lot was found in Locus F, while a single sherd was recovered in the northern part of Locus H. A single cross-mend was obtained for two sherds of the same unit; no cross-mends were identified between units. The locations of sherds from Vessel Lot MO4 corresponded with the identified Mockley ceramic clusters. Six sherds were recovered from the main cluster of Mockley ceramics identified in the northwest corner of Locus F Part 1, while another sherd was recovered from the less dense cluster located several meters south. The sherd found in Locus H was also contained within the cluster identified there. The majority of Vessel Lot MO4, located in the southern portions of the block, appeared to display some spatial integrity. However, when stratigraphic context was considered, nine of the sherds

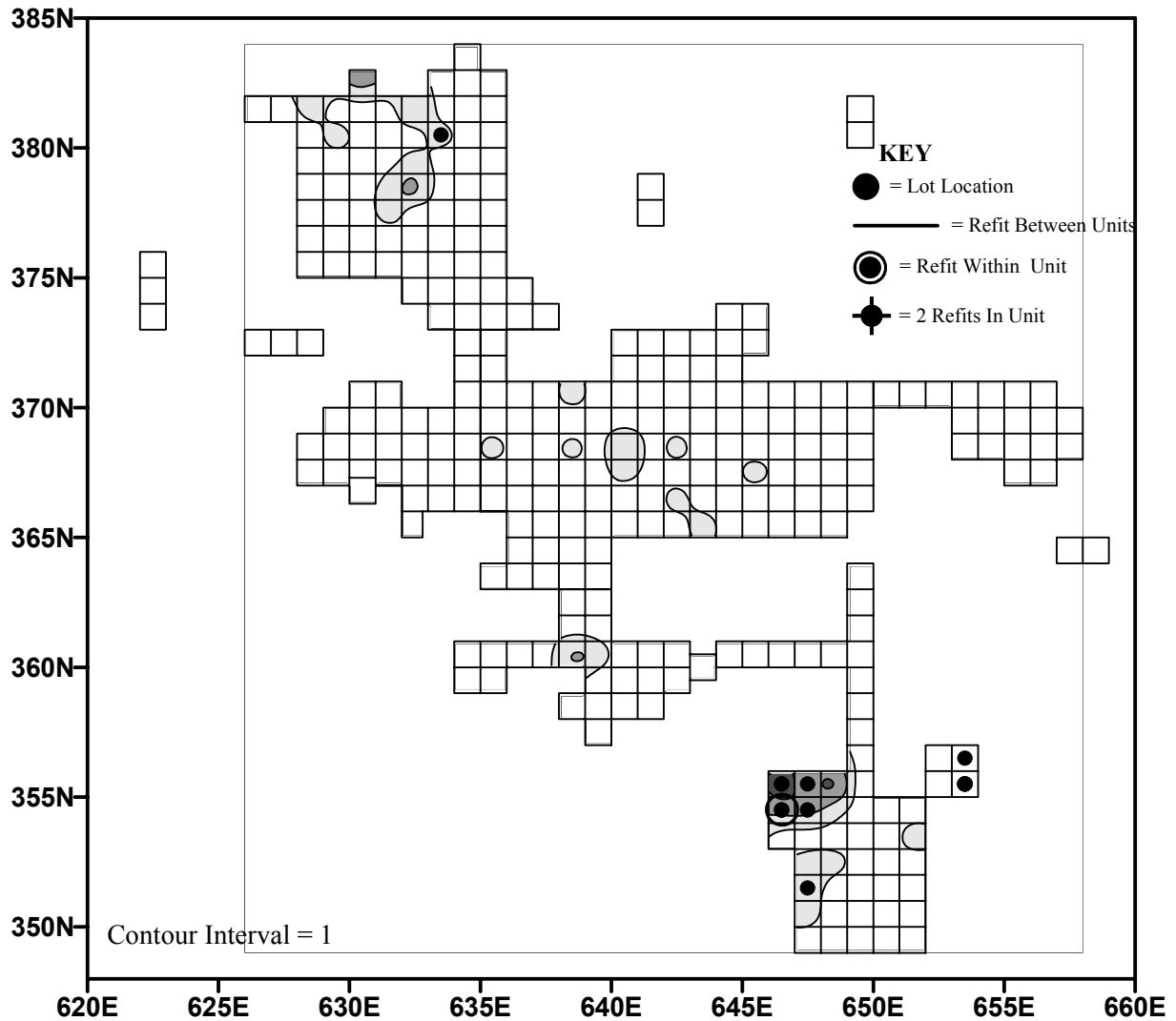


Figure 16.69 Northwest Main Block Location of Vessel Lot MO4, Overlaid on Distribution of All Mockley Ceramics

were from the Ao-horizon or redeposited contexts, while the other six were recovered from the E-horizon, demonstrating at least some vertical movement in this particular case. These results and the horizontal separation exhibited by one sherd found in Locus H, indicated a lack of spatial integrity for the vessel. Vessel Lot MO4 also was located in several of the same units as Vessel Lot MO2 and both exhibited wide separation between constituent sherds and recovery from surface and disturbed deposits. Together Vessel Lots MO2 and MO4 suggested that the Mockley clusters identified in computer plotting lacked spatial integrity and that isolating artifacts associated with the Mockley ceramics would be difficult and unreliable. However, despite these problems, the presence of Mockley ceramics in several unique vessel lots was important for the general site chronology and occupation history.

Clay Tempered ceramics comprised the greatest portion of the Hickory Bluff ceramic assemblage, both in total artifact count and number of Vessel Lots. They also comprised the greatest number of ceramics found within the Northwest Main Block of the site. The plot of all

Clay Tempered ceramics identified a number of clusters that varied in extent and artifact density (Figure 16.70). The densest cluster was identified in the western end of Locus F and comprised the smallest area, as a result of the block configuration. All of Locus F Part 1, to the east exhibited a less dense, but large area cluster. In Locus G, a dense cluster of moderate area was located to the southwest. Adjacent to the west of this cluster was another small secondary cluster. Further west in Locus G was a large cluster of Clay Tempered ceramics that extended from north to south across the block and contained two very dense clusters within it. Locus H contained two dense areas that were connected by a more ephemeral, less dense scatter. The cluster found in the southern portion of Locus H was not as dense but covered a greater surface

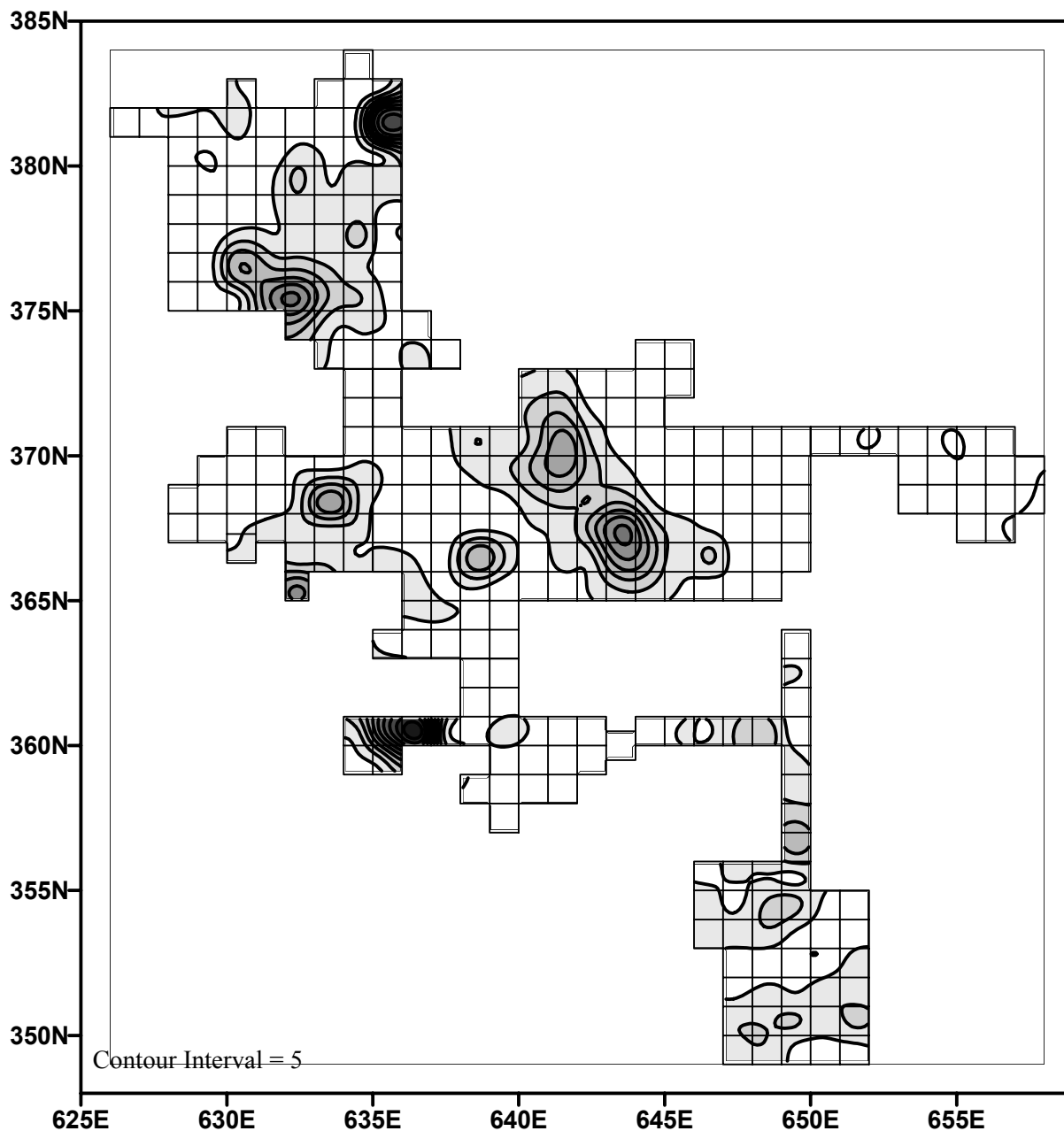


Figure 16.70 Northwest Main Block, Distribution of All Clay Tempered Ceramics

area. The other cluster was identified in the northeast corner of Locus H. It contained a more dense concentration of artifacts, but was restricted to a smaller area of the block. The degree of clustering present suggested the possibility of identifying activity areas associated with the Clay Tempered ceramics.

Vessel Lot CC01 consisted of 51 sherds recovered from 28 units (Figure 16.71). These units occurred in two cluster areas separated by 8 m. The first cluster area was located within Locus H and corresponded to a large cluster of Clay Tempered ceramics. This cluster consisted of 10 contiguous test units and three more units separated by 1 m. Within this cluster, refit groups were identified within two units and between two contiguous units. These 13 units contained a total of 30 sherds of Vessel Lot CC01. The next group of units was located in the center of Locus G within another large cluster that extended from north to south throughout the quadrant. This cluster contained seven contiguous units and two additional units separated by 1-3 m. Direct cross-mends were obtained between two units at the southern end. The nine units contained 15 sherds of Vessel Lot CC01. The remaining sherds from Vessel Lot CC01 occurred outside clusters of Clay Tempered ceramics, except for two sherds found in Locus F among less dense clusters. Vessel Lot CC01 evidenced a high degree of clustering within its two main groups, but the distance between these groups and the outlying sherds indicated less spatial integrity. In terms of stratigraphy, 24 sherds were recovered from the E-horizon, 18 sherds from the Ao-horizon, five from Feature 129, and one each from Features 1, 77, 249, and 313. Vessel Lot CC01 was important as it linked together the two largest clusters of Clay Tempered ceramics identified from the overall distribution of that type within the Northwest Main Block.

Ten sherds comprised Vessel Lot CC02. These sherds were recovered from six units; five clustered at the south end of Locus F and one located in the southeast corner of Locus G (Figure 16.71). The location of the sherds grouped to the south coincided with a secondary cluster of Clay Tempered ceramics. The sherd located further north did not correspond to any cluster. Cross-mends were obtained within two units, but not between any units. Two sherds were recovered from redeposited soils while the rest came from the E-horizon. Vessel Lot CC02 evidenced some spatial integrity despite the one sherd found 12 m further north than the rest. However, the low recovery rate of only 10 sherds and the low refit percentage somewhat lessened this interpretation.

Comparing the locations of Vessel Lots CC01 and CC02 demonstrated important patterns within the Northwest Main Block. Despite the widespread dispersal of Vessel Lot CC01, it remained separated from Vessel Lot CC02. The two lots helped to account for different clusters within the quadrant. They also demonstrated the lack of stratigraphic integrity at the site, whereby cross-mended ceramics could be found across stratum changes.

Vessel Lot CC11 comprised five sherds found in four units (Figure 16.72). The locations of sherds from Vessel Lot CC11 corresponded with the two largest clusters of Clay Tempered ceramics. Direct cross-mends were also obtained between these two clusters and within one unit. All five sherds were found beneath the Ao-horizon: two in the E-horizon, two in Feature 77, and one in Feature 129. The separation between the sherds of Vessel Lot CC11 and the low number of sherds found for the lot suggested a lower degree of spatial integrity. However, the distribution of Vessel Lot CC11 was important for providing direct cross-mends between the two

large clusters of Clay Tempered ceramics, which helped to illustrate their possible relationship and the possibility of linking these areas with other specific artifacts and or features.

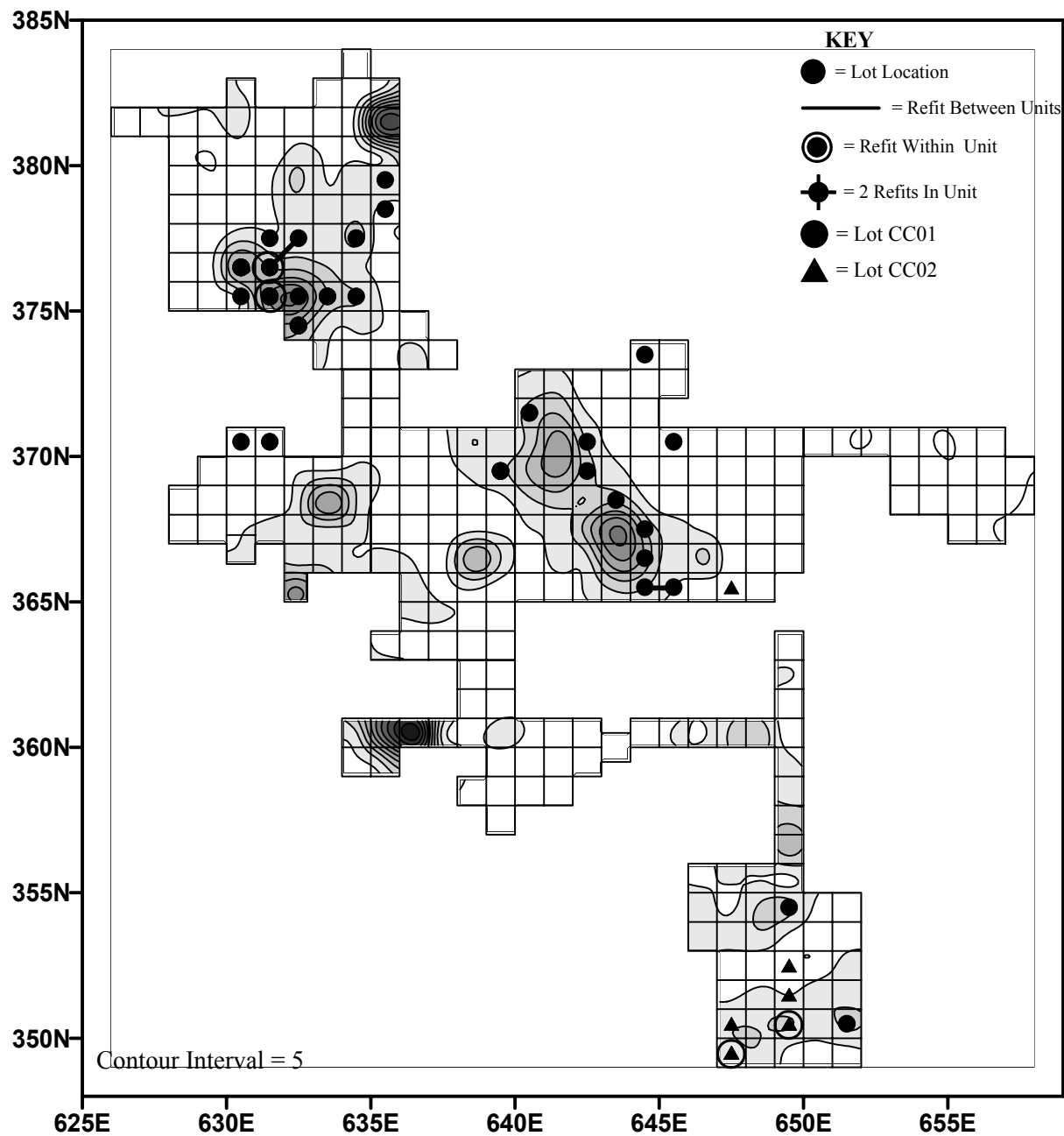


Figure 16.71 Northwest Main Block Locations of Vessel Lots CC01 and CC02, Overlaid on Distribution of All Clay Tempered Ceramics

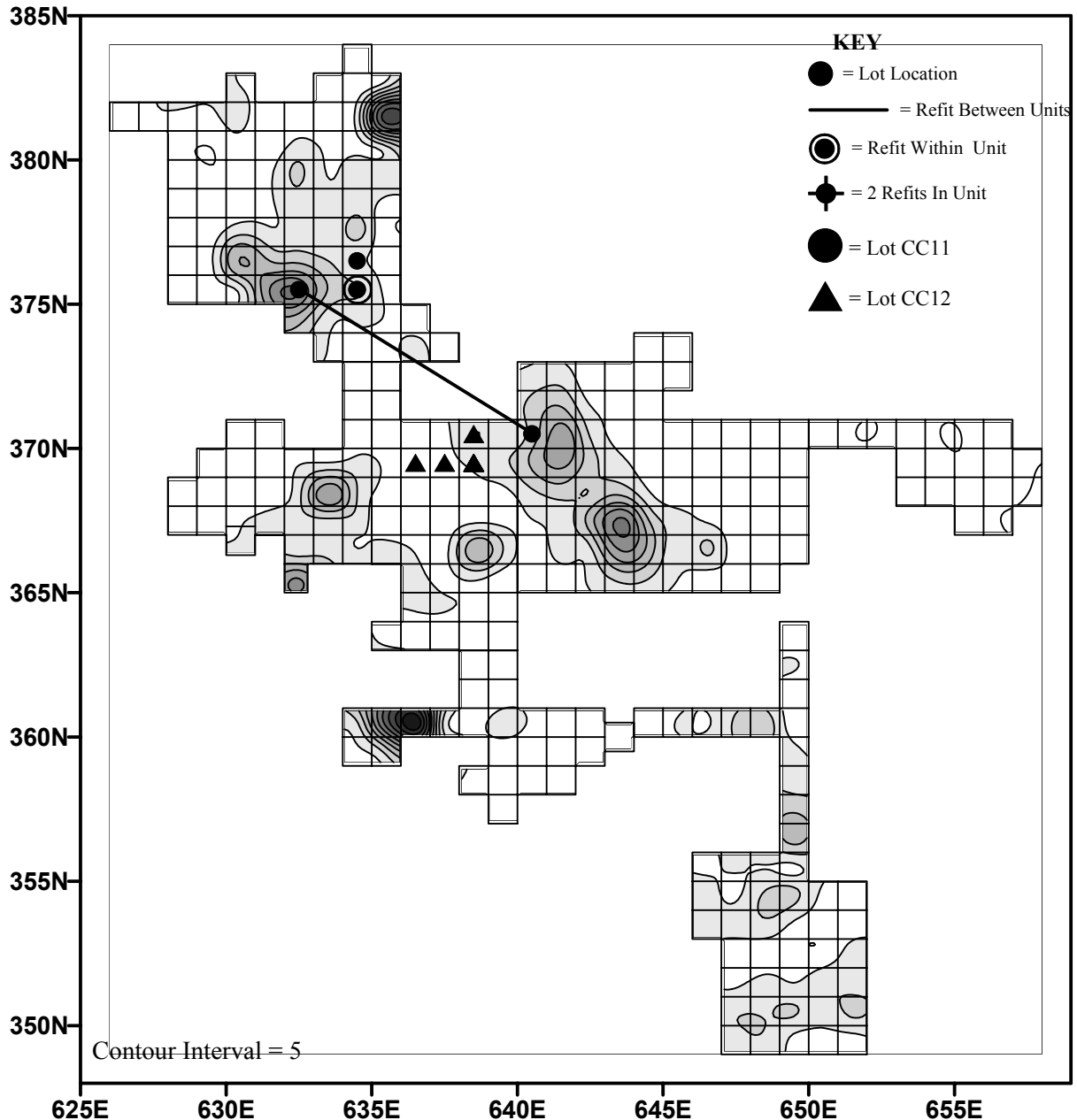


Figure 16.72 Northwest Main Block Locations of Vessel Lots CC11 and CC12, Overlaid on Distribution of All Clay Tempered Ceramics

Vessel Lot CC12 contained eight sherds found within four contiguous units in the northern part of Locus G (Figure 16.72), within and adjacent to one of the large clusters of Clay Tempered ceramics. Cross-mends were not identified for the sherds that comprised this lot. The E-horizon contained six of the sherds, while the Ao-horizon and Feature 297 each contained one sherd. Although small, Vessel Lot CC12 showed a good degree of spatial integrity, being located in several contiguous test units. It also remained mostly within one of the large clusters of Clay Tempered ceramics identified within the block, adding to its interpretive value. Vessel Lot CN01 represented the largest Clay Tempered vessel lot in terms of total count (77 sherds).

These sherds were found in 34 units (Figure 16.73). The locations of sherds from Vessel Lot CN01 corresponded with most of the large clusters of Clay Tempered ceramics. This was especially true of nine units in the south central part of Locus G that contained multiple cross-mends within and between those units, which also corresponded to a dense cluster identified there. Vessel Lot CN01 was also present in another dense cluster evident along the west edge of Locus F, although no cross-mends were obtained. Aside from these two areas, the other units that contained sherds from this lot were found sporadically throughout the quadrant and evidenced no clustering. This suggested limited spatial integrity for the lot. The dispersion could be indicative of reuse of the vessel after its initial breakage or from deliberate recycling for new intended purposes. The scattered nature of the isolated sherds found outside the main clusters of Vessel Lot CN01 could also be related to site cleaning activities or from trampling across the surface that contained the lot. In any event, the main cluster of Vessel Lot CN01 did display spatial integrity and its location within the large cluster of Clay Tempered ceramics helped to illustrate the intensity of use for that part of the site, for the occupations related to Clay Tempered ceramics.

A total of 33 sherds comprised Vessel Lot CN02; these were recovered from 20 different units (Figure 16.73) found in three separate groups and a number of outlying areas. The largest group contained nine units and was located in the northern portion of Locus G within the large cluster of Clay Tempered ceramics. Several cross-mends were obtained within and between these units. In addition, cross-mends were obtained between this group of units and a second group of units located in the center of Locus H. This second group contained only three units, but was within the large cluster of ceramics located there. The final group was found more than 20 m south of the others, in the southern portion of Locus F. These four units were within two separate, light clusters. A single cross-mend was obtained between units in this location. The remaining outlying locations of Vessel Lot CN02 were found within other concentrations, except for one sherd found at the intersection of Loci G and H, and another found in an unincorporated test excavation 20 m north of the main clusters. This last sherd was important as it established a relationship between the Northwest Main Block and an outlying test excavation, and also illustrated the pervasiveness of Clay Tempered ceramics. Overall, Vessel Lot CN02 showed a fair amount of spatial integrity within its two main clusters of units. The number of outlying units and the group further south were somewhat problematic, but could be the result of several different reuse or recycling behaviors.

Comparison of the locations of Vessel Lots CN01 and CN02 had several implications for the Northwest Main Block. The main clusters of the sherds from the lots maintained separation from each other and corresponded to different clusters of Clay Tempered ceramics. Both contained a number of outlying sherds. The lots were important for establishing the spatial integrity of the large clusters in which they were found. Despite the outlying sherds, their main groups were effective in illustrating the spatial integrity of the clusters and the possibility of associating activity areas with the ceramics. Both lots also illustrated the intensity of use of within the block for the Clay Tempered wares in general.

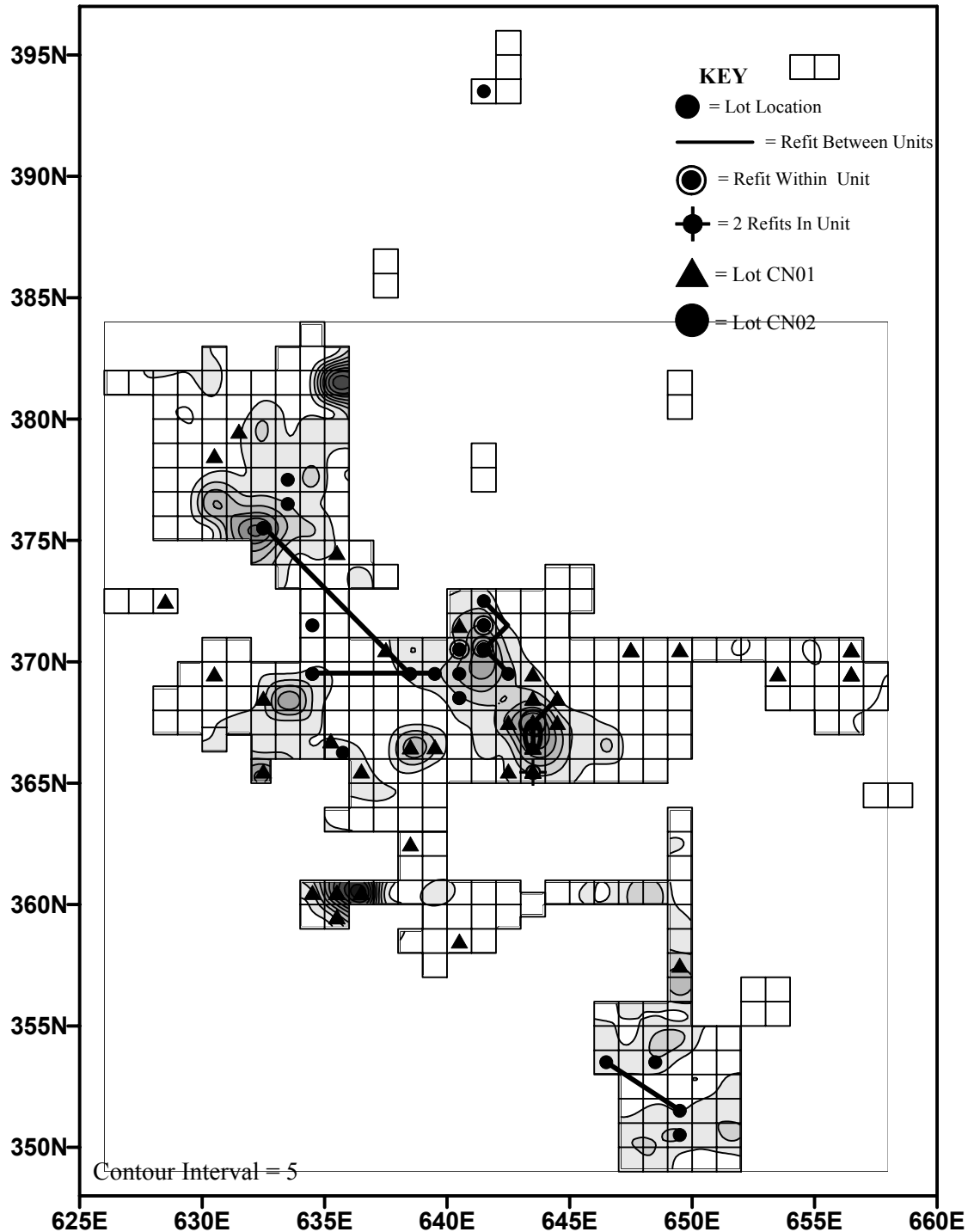


Figure 16.73 Northwest Main Block Locations of Vessel Lots CN01 and CN02, Overlaid on Distribution of All Clay Tempered Ceramics

Vessel Lot CN08 comprised 12 sherds recovered from seven units (Figure 16.74). The units were found in three groups of two and one extra, and were separated by considerable horizontal distances. The first group was located within the large cluster of Clay Tempered ceramics within the center of Locus G. Cross-mends between sherds in these two units were

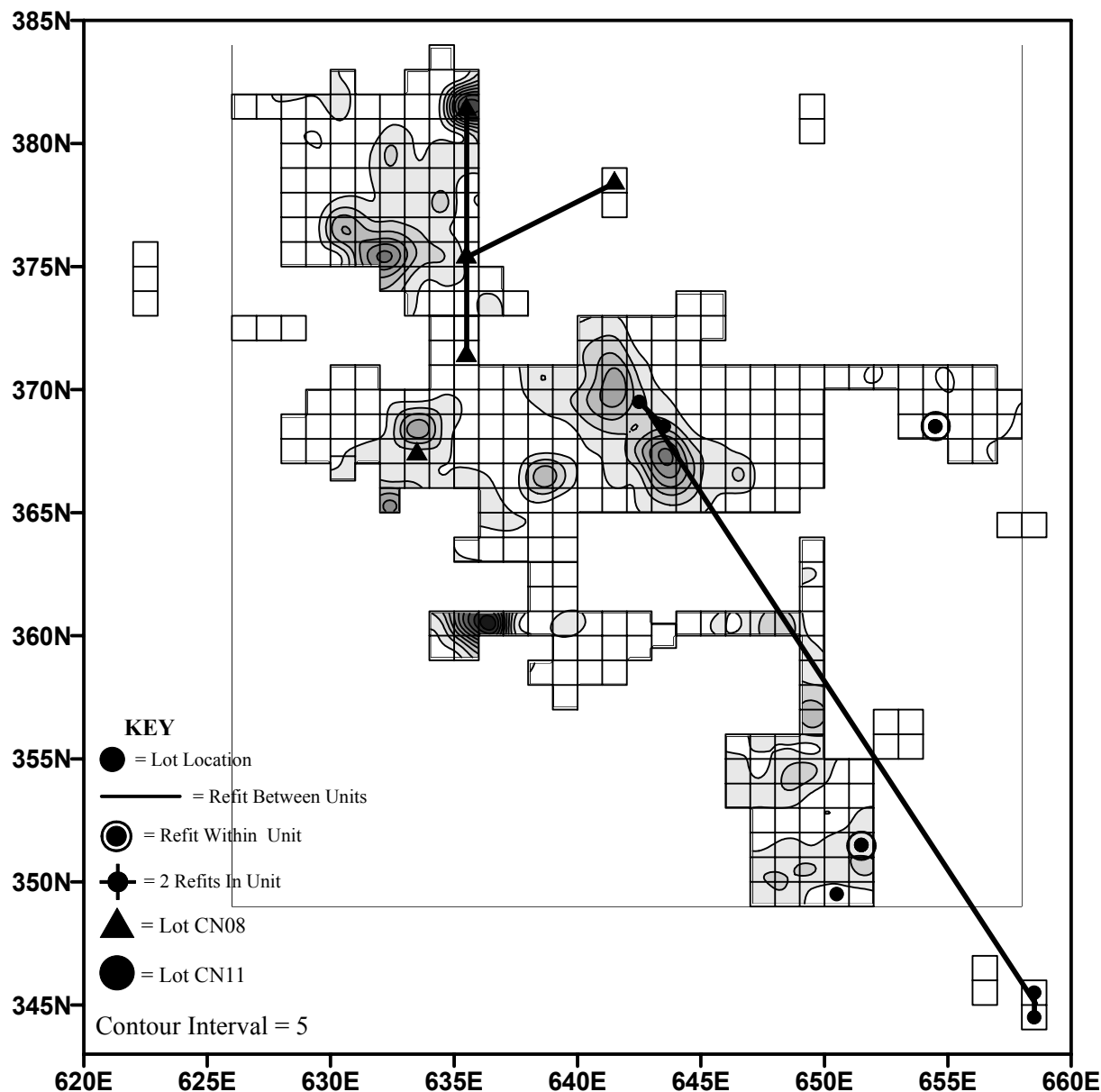


Figure 16.74 Northwest Main Block Locations of Vessel Lots CN08 and CN11, Overlaid on Distribution of All Clay Tempered Ceramics

obtained. The isolated unit, contained a cross-mend within it but not between other units that contained sherds from Vessel Lot CN08. It was located in an area that had no Clay Tempered ceramic clusters at the eastern portion of Locus G. The next group of two units was found in the southern portion of Locus F. One of the units contained cross-mended sherds within it, but not between units. The final group of units was found outside the quadrant in two unincorporated test excavations. Cross-mends were found between these two units, as well as to the units that comprised the first group in Locus G. This cross-mend occurred over a distance greater than 30 m. The scattered nature of sherds from Vessel Lot CN08 suggested less spatial integrity for the lot, but was important for creating associations between the main block and outlying units. The

sherds were recovered from a variety of stratigraphic contexts including the E and Ao-horizons, in addition to Features 2 and 287.

Five sherds comprised Vessel Lot CN11, which provided another example that tied the main block to outlying test units (Figure 16.74). The five sherds were found in five separate test units that spanned over 15 m. The locations of the sherds of Vessel Lot CN11 coincided with clusters of Clay Tempered ceramics. These clusters included the large cluster to the southwest side of Locus G, the large diffuse cluster that spanned the east side of Locus H, and the dense cluster along the northeast edge of Locus H. Four sherds of Vessel Lot CN11 cross-mended to form a single refit group. A cross-mend was obtained between the Northwest Main Block and an unincorporated test excavation found 6 m east of the quadrant. This mend was an important link between areas of the site.

Vessel Lot MA11 was another lot that displayed horizontal separation across significant distances within the Northwest Main Block, with an additional three sherds located in Locus H Block 2 (Figure 16.75). In total, Vessel Lot MA11 consisted of 27 sherds found in 14 units separated by 30 m or more. Several cross-mends were obtained for sherds recovered within the same unit. In two cases, cross-mends were obtained for separate units. One of these cross-mends was between contiguous units; the other was obtained for two units separated by 10 m. The locations of sherds from Vessel Lot MA11 corresponded with several of the large Marcey Creek clusters, as well as secondary clusters identified in the computer plotting. This result helped to link the different concentrations of Marcey Creek ceramics. The lack of clustering exhibited by Vessel Lot MA11 suggested a lack of spatial integrity and dispersal of the vessel, especially when considering the overall distance between sherds. The locations of sherds from Vessel Lot MA11 were similar to those from several other vessel lots, including Vessel Lots MA02 and MA07, but lacked the clustering evidenced by the other lots. The wide distribution of Vessel Lot MA11 could be a reflection of reuse behavior or recycling that dispersed the vessel over wider distances. The dispersion of this lot, although wide, did not tend to undermine the clusters in general as they contained other vessel lots that maintained clustering. Vessel Lot MA11 helped to tie the areas of Marcey Creek ceramics together and illustrated the interrelation between these identified clusters.

Vessel Lot W1 consisted of a total of 26 sherds that were recovered from 18 units (Figure 16.76). Of these units, there were only two groupings identified. The first group, comprised of five units, contained a total of nine sherds. It was located at the intersection of Loci H and G in the vicinity of a Wolfe Neck ceramic cluster. The second group was located at the northern edge of Locus G and was associated with another small cluster of Wolfe Neck sherds. It comprised three units that contained five sherds. The presence of this lot in these two Wolfe Neck clusters helped to associate them and supported the interpretation that the two clusters were likely part of the same activity area, appearing separate as a result of the testing configuration. Only three other locations of sherds from Vessel Lot W1 corresponded with Wolfe Neck clusters. One of these was located at the western edge of Locus G. The next was found several meters east of the first and was the only sherd recovered from the largest cluster of Wolfe Neck sherds, which extended north to south across Locus G.

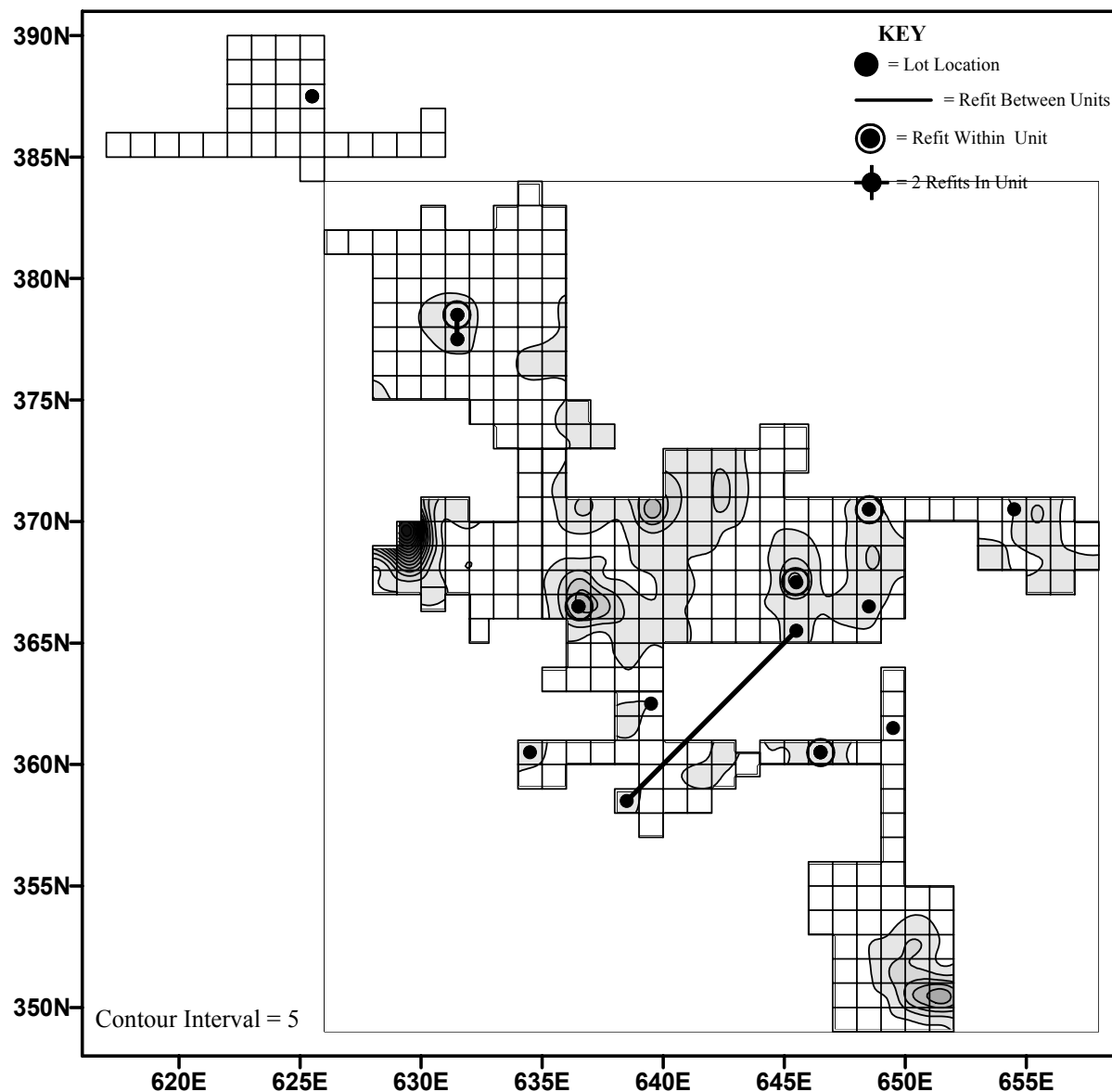


Figure 16.75 Northwest Main Block and Locus H Block 2, Location of Vessel Lot MA11, Overlaid on Distribution of All Marcey Creek Ceramics

The final sherd location was further east in the initial cruciform within a very limited cluster of Wolfe Neck ceramics. Vessel Lot W1 evidenced a lack of spatial integrity as evidenced by the recovery of a Vessel Lot W1 sherd 40 m south of the other Vessel Lot W1 sherds, and the lack of clustering of sherds even within the Northwest Main Block. The sherd recovered furthest to the south was recovered from the plow zone and two more were from disturbed contexts. A total of 11 sherds were found in the Ao-horizon, while the E-horizon contained 10 sherds. Features 77 and 129 each contained a single sherd from Vessel Lot W1. These results had varying effects on spatial interpretation. Vessel Lot W1 was able to make an association between two smaller clusters within the quadrant. Conversely, many of the sherds were found outside of identified clusters, weakening that association. Vessel Lot W3 was the largest Wolfe Neck lot in terms of count, containing 80 sherds. These sherds were recovered

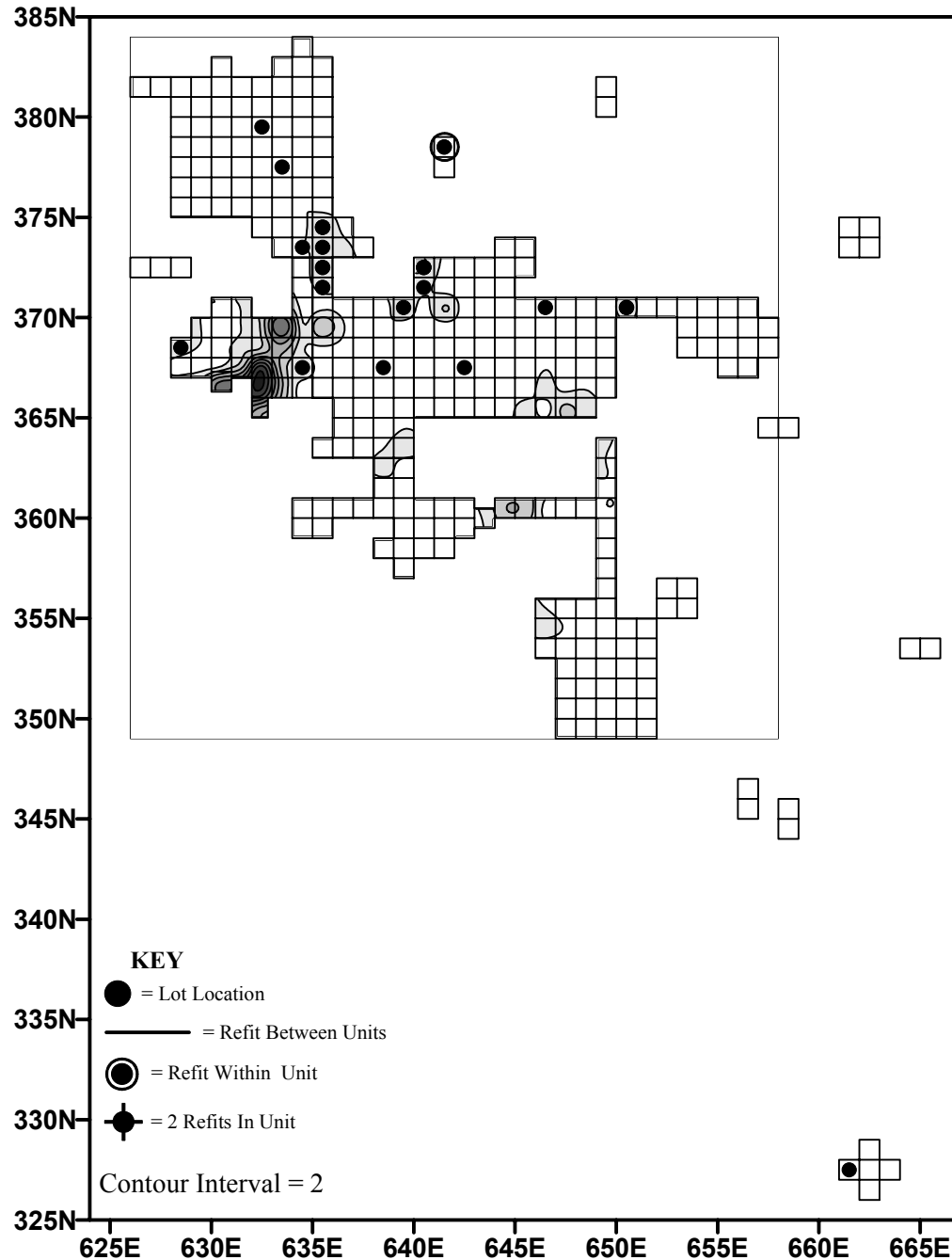


Figure 16.76 Northwest Main Block and Outlying Areas, Location of Vessel Lot W1, Overlaid on Distribution of All Wolfe Neck Ceramics

from 22 test units in the main block, one unit in Locus H Block 2, and one unincorporated test unit (Figure 16.77). The majority of Vessel Lot W3 was recovered from a group of 17 contiguous units that corresponded with the largest Wolfe Neck cluster. Direct cross-mends were obtained within and between many of these units, for a total of nine refit groups. Direct cross-mends were also obtained between the main cluster and two of the outlying units that contained sherds of Vessel Lot W2 over distances of 15 m. Additional locations of sherds from

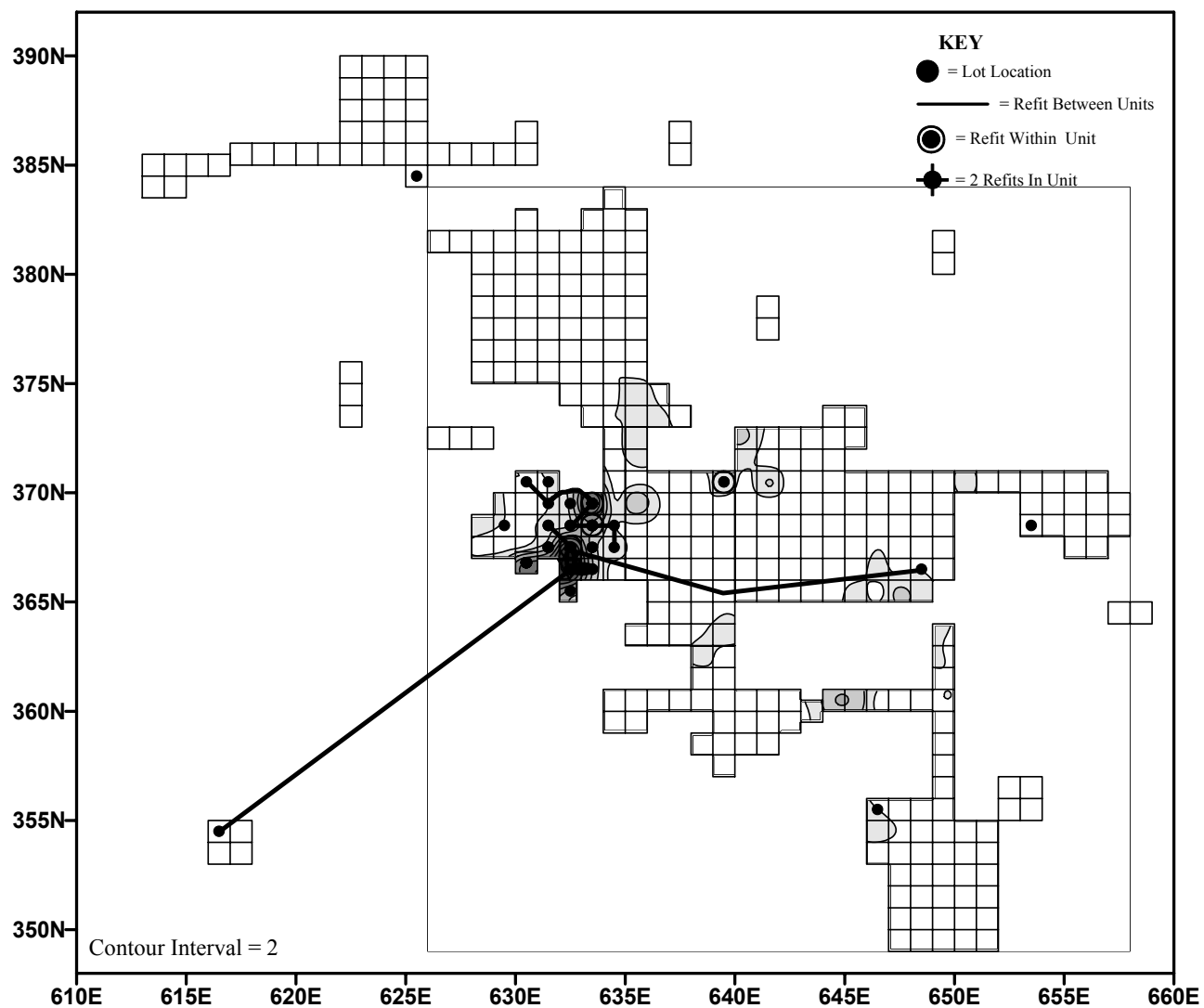


Figure 16.77 Northwest Main Block, Locus H Block 2 and Outlying Areas, Location of Vessel Lot W3, Overlaid on Distribution of All Wolfe Neck Ceramics

Vessel Lot W3 also corresponded to clusters of Wolfe Neck ceramics, including: 2 cross-mend sherds at the north edge of Locus G; one sherd from the northwest corner of Locus F Part 1; and one sherd found at the southeast corner of Locus G. The high refit percentage and total numbers of sherds found within the main concentration of Vessel Lot W3 indicated a high degree of spatial integrity. This integrity was mitigated by sherds found away from the main cluster. In terms of stratigraphy, the sherd found furthest to the east, which cross-mended to the main cluster, was found in a disturbed context at the base of the bluff near the edge of the water and likely represented the result of erosion of the site or trampling of the main cluster. The Ao-horizon contained the highest numbers of sherds from Vessel Lot W3 (45 sherds), followed by the E-horizon (24 sherds), Feature 184 (7 sherds), and one each from Features 88, 284, and 310. The stratigraphic implications showed a high degree of spatial integrity despite being found in the upper surface Ao-horizon. The site formation processes illustrated are important, as an Early Woodland ware was found with this much integrity in the upper stratum of the site deposits.

Vessel Lot CN07 consisted of 70 sherds and represented the second highest total for a single Clay Tempered lot (Figure 16.78). These sherds were recovered from a total of 43 units located in Locus A Blocks 1 and 2; an unincorporated test excavation north of Locus A; and from within all Loci of the Northwest Main Block. These locations spanned distances of greater than 40 m and suggested a low level of spatial integrity for the vessel. More importantly, though, the distributions of the sherds from this vessel provided direct linkages between separate portions of the site. Although direct cross-mends were not obtained across these distances, the information obtained from this lot indicated that they are likely from the same vessel. The location of sherds from Vessel Lot CN07 also corresponded to the large clusters of Clay Tempered ceramics identified within these diverse blocks, also providing links between these possible activity areas. These linkages are essential for interpretations of site structure, as well for defining areas of site use for different chronological periods.

Late Woodland period artifacts were found with low frequency at Hickory Bluff. Vessel Lot T1 was the Townsend vessel with the most total sherds (26). These sherds were found mostly in three groups of units in the main excavation block of the Northwest Main Block, but two sherds were recovered from Locus I further north (Figure 16.79). When overlaid on the plot of all Townsend ceramics, the locations of sherds from Vessel Lot T1 corresponded closely with the identified clusters. The first group of units was found along the western portion of Locus F and corresponded with the highest density cluster identified. These three units contained eight sherds and had cross-mends between two contiguous units. The next group of units was located 5-6 m north of the first and corresponded with two small clusters areas of Townsend ceramics. These four test units contained eight sherds of Vessel Lot T1 and cross-mends were obtained for two sherds found within the same unit. The third group of units was found 5-6 m further north than the second group. These five units contained eight sherds of Vessel Lot T1; no cross-mends were identified. The remaining two sherds were found approximately 25 m north in Locus I, 42 m from the northernmost group in Locus G. This separation suggested disturbance and a lack of spatial integrity for the lot. Vessel Lot T1 was recovered from several stratigraphic contexts: 11 sherds from the Ao-horizon, 10 from the E-horizon, and five from Feature 77. The large distances between sherds from Vessel Lot T1 may be a reflection of reuse or continued use of the vessel after its initial breakage, or specific recycling of the vessel. The distance might also reflect

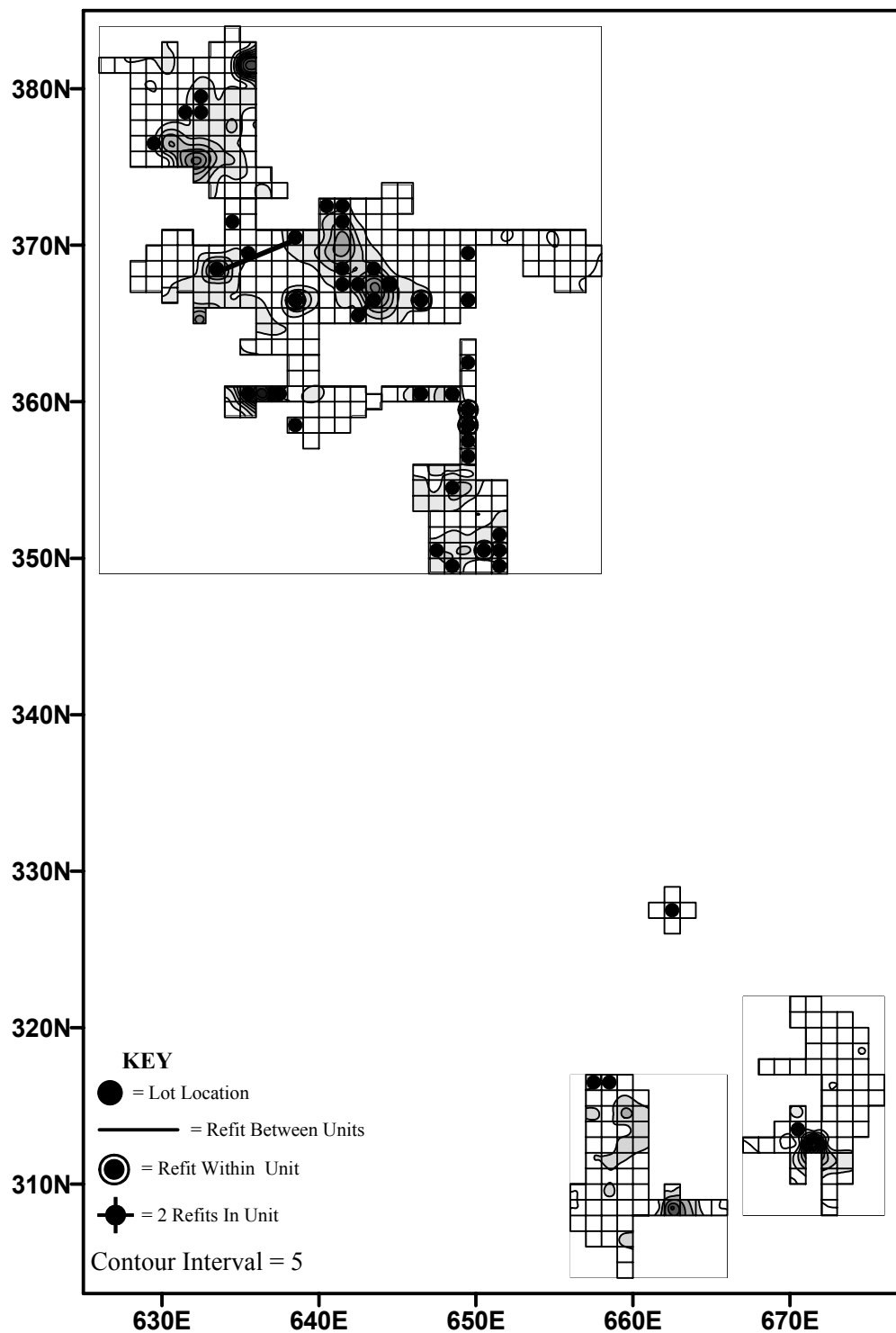


Figure 16.78 Northwest Main Block and Locus A Blocks 1 and 2 Location of Vessel Lot CN07, Overlaid on Distribution of All Clay Tempered Ceramics

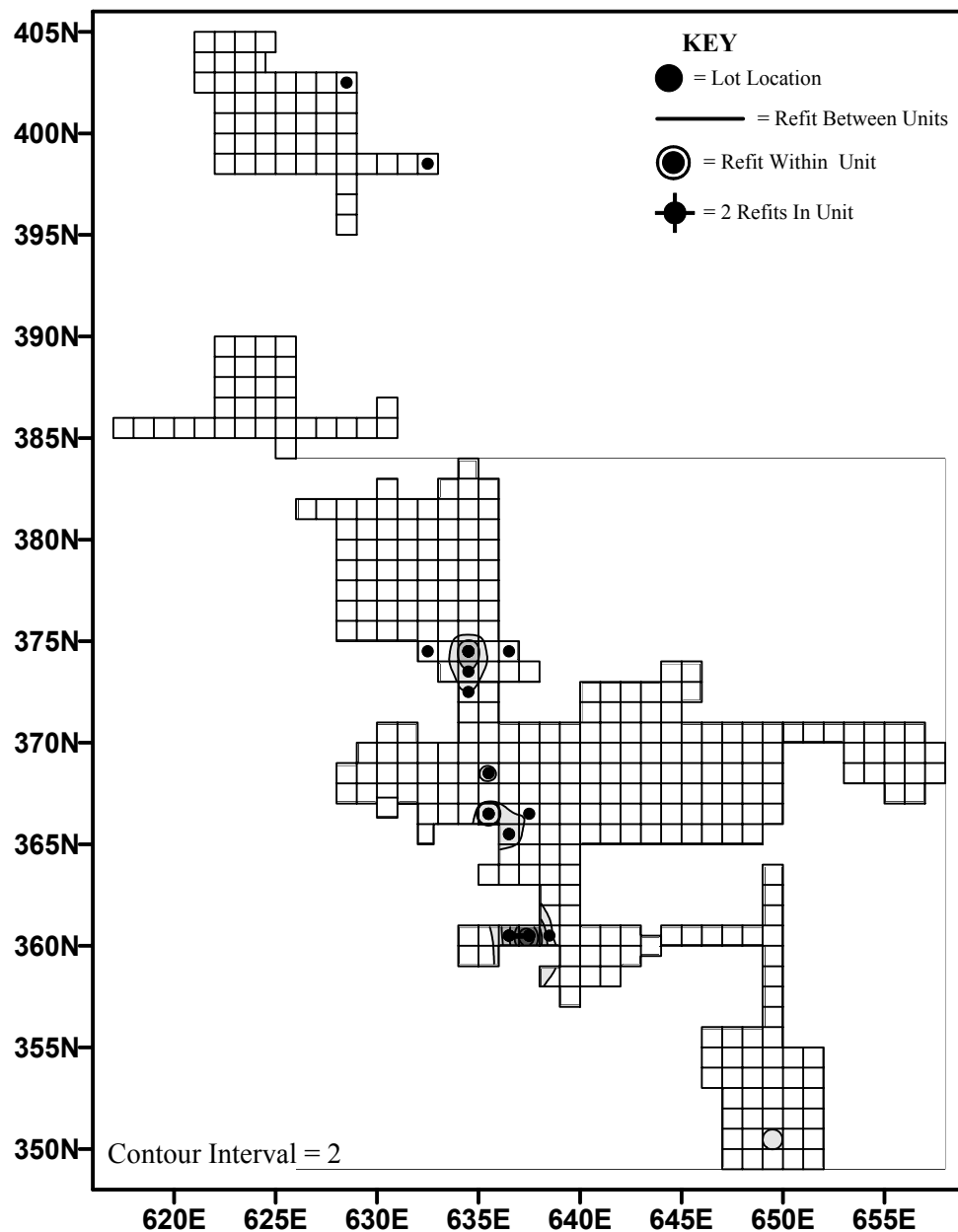


Figure 16.79 Northwest Main Block and Locus I, Location of Vessel Lot T1, Overlaid on Distribution of All Townsend Ceramics

site cleaning activities or dispersion from other site activities. The relatively low numbers of Late Woodland artifacts and the apparent lack of spatial integrity for the most substantial Late Woodland ceramic vessel, suggested that identification of specific Late Woodland activities would be difficult. The presence of Late Woodland artifacts though limited, was important for the general site chronology and likely represented specific behavioral changes for this time period.

Summary

The Northwest Main Block contained the highest concentration of artifacts for the site, which when distributed as a single plot, presented a pattern of overprinting and confusion. However, within this seemingly palimpsest assemblage, a number of discrete clusters were identified. Four clusters of lithic debitage were identified in the plot of all debitage. When these clusters were examined further, they appeared to represent very specific activity areas: one cluster, a rhyolite knapping episode; one cluster a discrete quartz reduction episode and a longer term jasper accumulation; and another cluster represented two separate jasper concentrations. TAS distributions correlated closely with the locations of evident TAS features, even when the stones designated for the feature were removed, which suggested that minimal movement of the stones had occurred. The overall plot of ceramics revealed seven identifiable clusters that when divided by specific types, suggested specific patterns of use. Clay Tempered and Marcey Creek ceramics dominated, but often showed degrees of horizontal separation from each other, which suggested that a degree of integrity was present and that further associations between ceramic clusters could be made with other artifact types. Areas of low artifact frequencies noted on plots for specific artifact types are likely to represent areas utilized for other activities. Comparison of various artifact plots may provide a clearer view of site structure.

Locus H Block 2

Locus H Block 2 was separated from the larger, contiguous block in the Northwest Quadrant by only two meters and remained within the high artifact density zone. Seven features were identified within the block (Figure 16.80). These included basins (Features 78 and 276), a TAS cluster (Feature 227), biotic (Features 85 and 153), geomorphic (Feature 82), and natural features (Feature 183). The majority of these features were found clustered in the main portion of the block (Features 78, 82, 153, and 183). Feature 85 was located just south of that area and near Feature 183. Features 227 and 276 were isolated in the block and did not overlap with any other evident features. The general pattern suggested differential utilization of the space, especially associated with the non-intersecting feature types.

The block displayed one of the highest overall artifact densities for the site, which was visible on the site wide distribution of all artifacts (Figure 16.3). These high artifact counts were related to the presence of Feature 78 in the northwest portion of the block. The artifact density decreased in the units away from the feature and was noticeably diminished along the eastern segment of the block (Figure 16.81). The general pattern observed in the total artifact distribution was maintained when the artifacts were separated by stratigraphic context. However, the plot of A-horizon artifacts resulted in the heaviest concentration shifting to the east, in the northern portion of the block. Artifacts within the A-horizon accounted for less than a third of the totals from the unit. The distribution of artifacts within the E-horizon was nearly identical to the total artifact distribution, albeit with lower total numbers.

The distribution of artifacts by type within Locus H Block 2 produced noticeably different spatial patterning. The artifacts in the block consisted mostly of TAS and, to a lesser extent, lithic debitage. Ceramic counts were low when compared to other units in the Northwest Quadrant of the site. Lithic debitage was found across the block with the same relative frequency as the distribution noted for all artifacts. The highest counts were located in the

northwest corner of the block, associated with Feature 78, and displayed a relative decline in frequency away from the feature. When plotted for only the E-horizon, there was even less clustering and the lithic debitage was found evenly across the block.

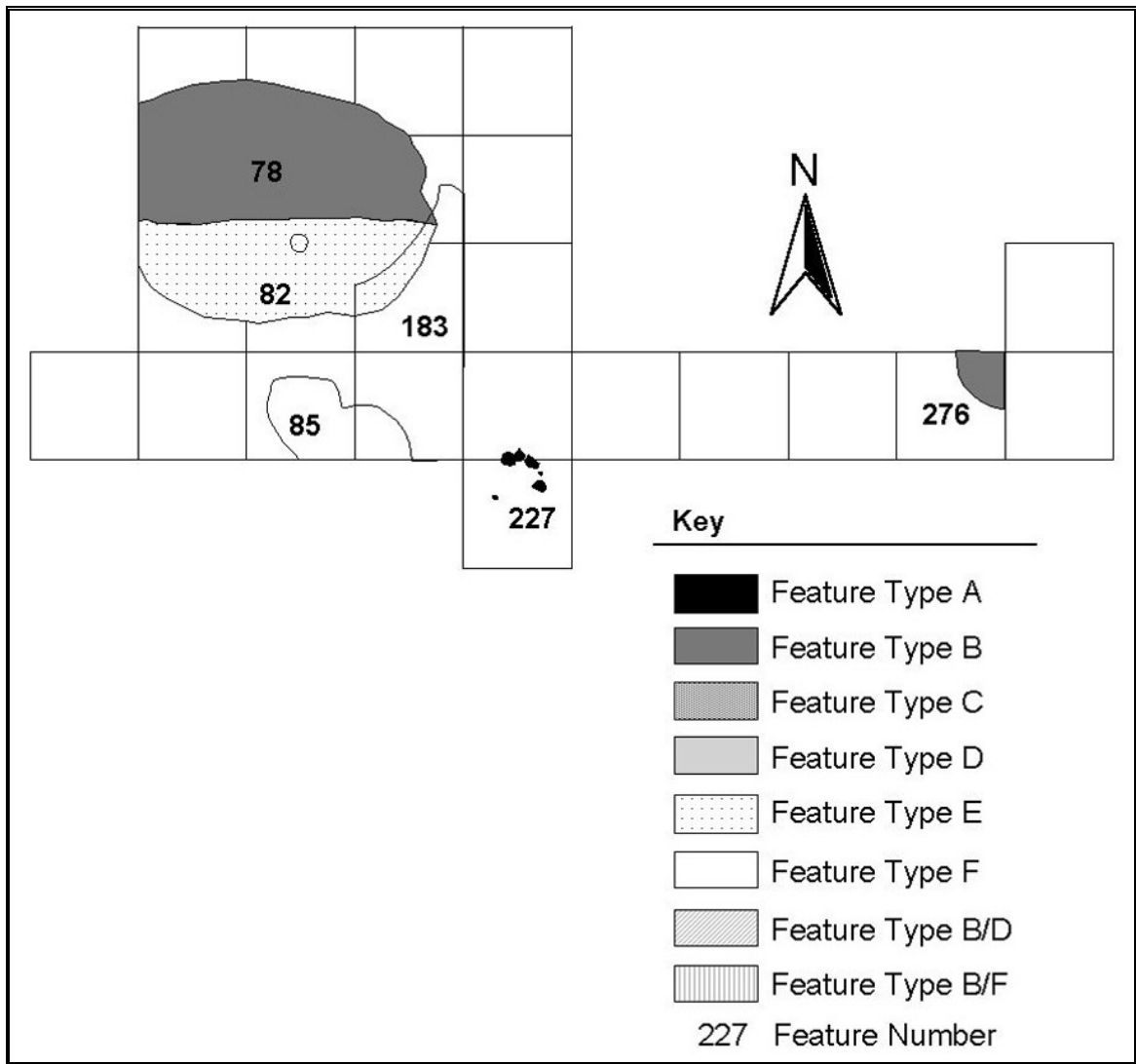


Figure 16.80 Locus H Block 2, Feature Locations

TAS Distribution

The frequency of TAS for this block was relatively high, yet only one evident stone feature was identified. This was Feature 227, a relatively small cluster of TAS composed of 7 total fragments. It was located at the southern edge of the block, away from the densest concentration (Figure 16.82). The elevated counts away from the evident stone feature suggested some differential area use and the likelihood of latent TAS features, either masked from natural dispersion or redeposited through site maintenance activity. The TAS counts for Feature 78, the large basin, were very high and comprised in a significant portion of the cluster noted. However, when TAS artifacts were plotted only for the E-horizon, a dense concentration was revealed that comprised the southern edge of the concentration noted in the distribution of

all TAS. This latent cluster suggested that several activities may be represented in this part of the block. In addition, the lack of TAS found in the units in the eastern portion of the block was also suggestive of different activity and space use.

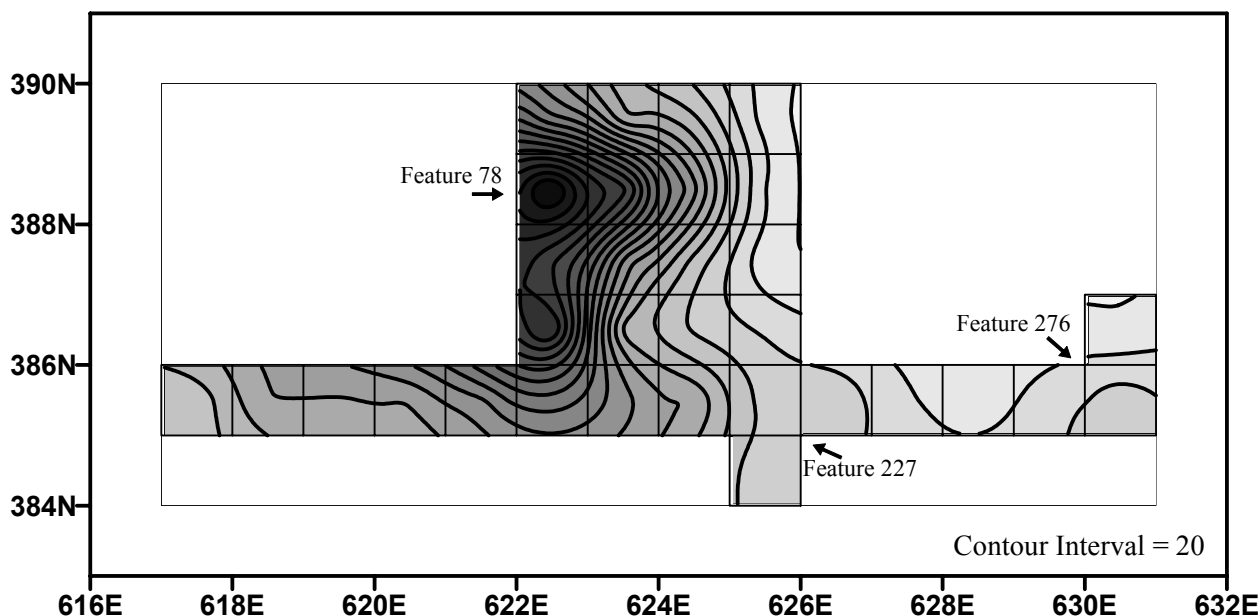


Figure 16.81 Locus H Block 2, Distribution of All Prehistoric Artifacts

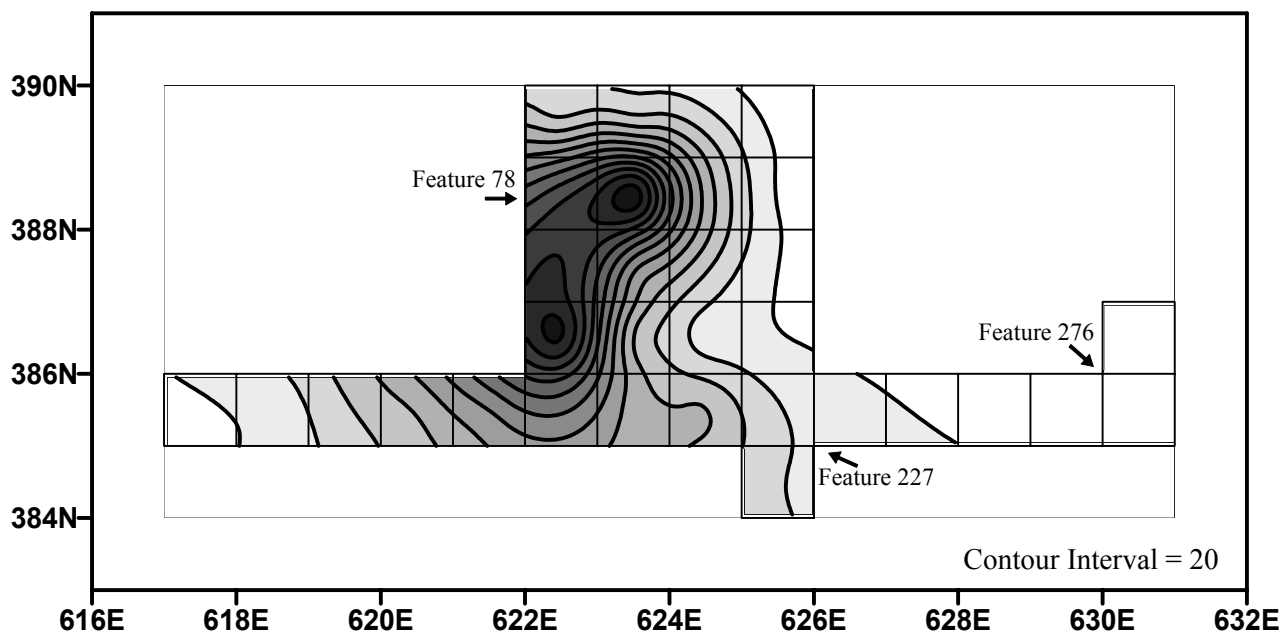


Figure 16.82 Locus H Block 2, Distribution of All TAS

Conversely, although the overall counts were low, the plot of prehistoric ceramics within the block revealed two discrete clusters (Figure 16.83). The ceramics were recovered mainly

from the units located near Feature 78 in the northwest corner of the block. However, only one sherd was recovered from within the feature; the majority was located in the E-horizon outside the visible bounds of the feature. Another small cluster of ceramics was visible along the eastern edge of the block and may have continued outside of the excavation. The discrete clustering of ceramics suggested the potential for differential space use in this part of the site. In addition, the main cluster of ceramics was located adjacent to a concentration of TAS.

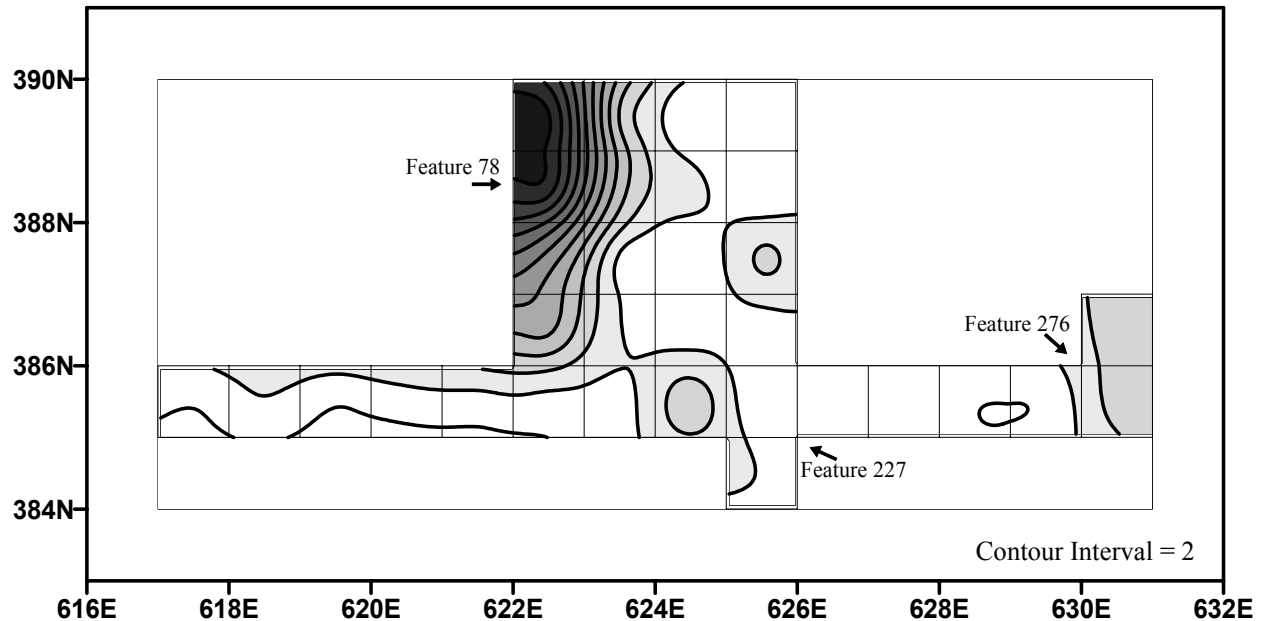


Figure 16.83 Locus H Block 2, Distribution of All Ceramics

Ceramic Distribution

Several vessel lots were recovered from Locus H Block 2. These included Early Woodland Vessel Lots MA08, MA10, MA11, W3, and D1. Middle Woodland Vessel Lots included MO8 and CN21. The variety of these vessel lots suggested that this portion of the site was repeatedly used throughout prehistory, particularly during the Early Woodland period. In terms of total number of sherds, however, Clay Tempered ceramics were the most represented of the identified types. Distributions of the ceramics by type for the block, however, did not produce any clear patterns that were much different from those produced by the plot of all ceramics (Figure 16.83). As a result, the further implications of the spatial patterning of the vessel lots from the block will be discussed in conjunction with the rest of the vessel lots. Several of the lots represented in Locus H Block 2 were recovered from multiple excavation blocks, which was an important pattern for the site. In general, Locus H Block 2 was another example where consideration of the total number of sherds or the number of vessels represented would produce differing interpretations for the block and illustrated the importance of assessing both complementary sets of data.

Summary

Locus H Block 2 was a relatively small block that contained some of the highest artifact counts per unit for the site. Despite the high counts of artifacts, very few spatial patterns emerged from the data. The total artifact distribution resulted in a single large cluster in the vicinity of Feature 78. When artifacts were plotted by type, they tended to follow this same pattern without clear internal clustering. However, the TAS plot did reveal another cluster within the E-horizon that likely represented a diffused feature or the secondary deposition of TAS. Ceramic plots also revealed one large cluster and one more diffuse cluster; however, these clusters were not furthered linked to specific wares. The overall pattern in Locus H Block 2 was suggestive of a heavy accumulation of artifacts in a localized area. This could represent site cleaning activities or just the long-term buildup of many small occupations.

Locus I

Locus I was situated in the extreme upper northwest portion of the site in a moderate to high artifact density zone. Excavations in the block identified six features including a large basin (Feature 90); a medium basin (Feature 278); two TAS clusters (Features 173 and 175); a biotic disturbance (Feature 179); and natural discontinuity (Feature 292) (Figure 16.84). All features maintained horizontal separation. The two TAS features were located adjacent to the east of the large basin, which suggested patterned use of the area. There was a noticeable lack of evident features to the south and eastern areas of the block, which further suggested the spatial integrity of the identified features, and indicated less intensity of use for the remainder of the block.

The plot of artifacts for the block revealed two discrete artifact concentrations (Figure 16.85). The first cluster was the highest density cluster and coincided with the location of Feature 90. The second cluster was less intense and was present along the northwest edge of the block in the vicinity of Feature 278. Away from the evident features, there was a noticeable decrease in artifact counts within the rest of the block. This lack of artifacts was most noticeable at the intersection of and within the south and east wings of the block. The patterning observed within the block was suggestive of differential use of the area and the possibility of discrete activities associated with the features.

When artifacts were plotted only for the E-horizon, clustering masked by the increased counts associated with Feature 90 became apparent (Figure 16.86). There was still a cluster located along the northwest edge of the block, but it was shifted slightly to the south. A different cluster was apparent in the southwest corner of the block, south of Feature 90. Another less intense cluster was also visible in the vicinity of TAS Features 173 and 175, and may represent trampling of artifacts from the visible spatial bounds for these features. The eastern and southern wings still exhibited lower artifact counts in relation to the other units in the block. Another gap also appeared in the location of Feature 90, which was so large and deep that it replaced what would have been the E-horizon and reached into the C-horizon in several units. The artifact clusters identified in the E-horizon distribution were important as they may represent activity areas associated with the evident features delineated within the block. The clusters also illustrated that information for differential space use was still present at the site, despite the level of overprinting.

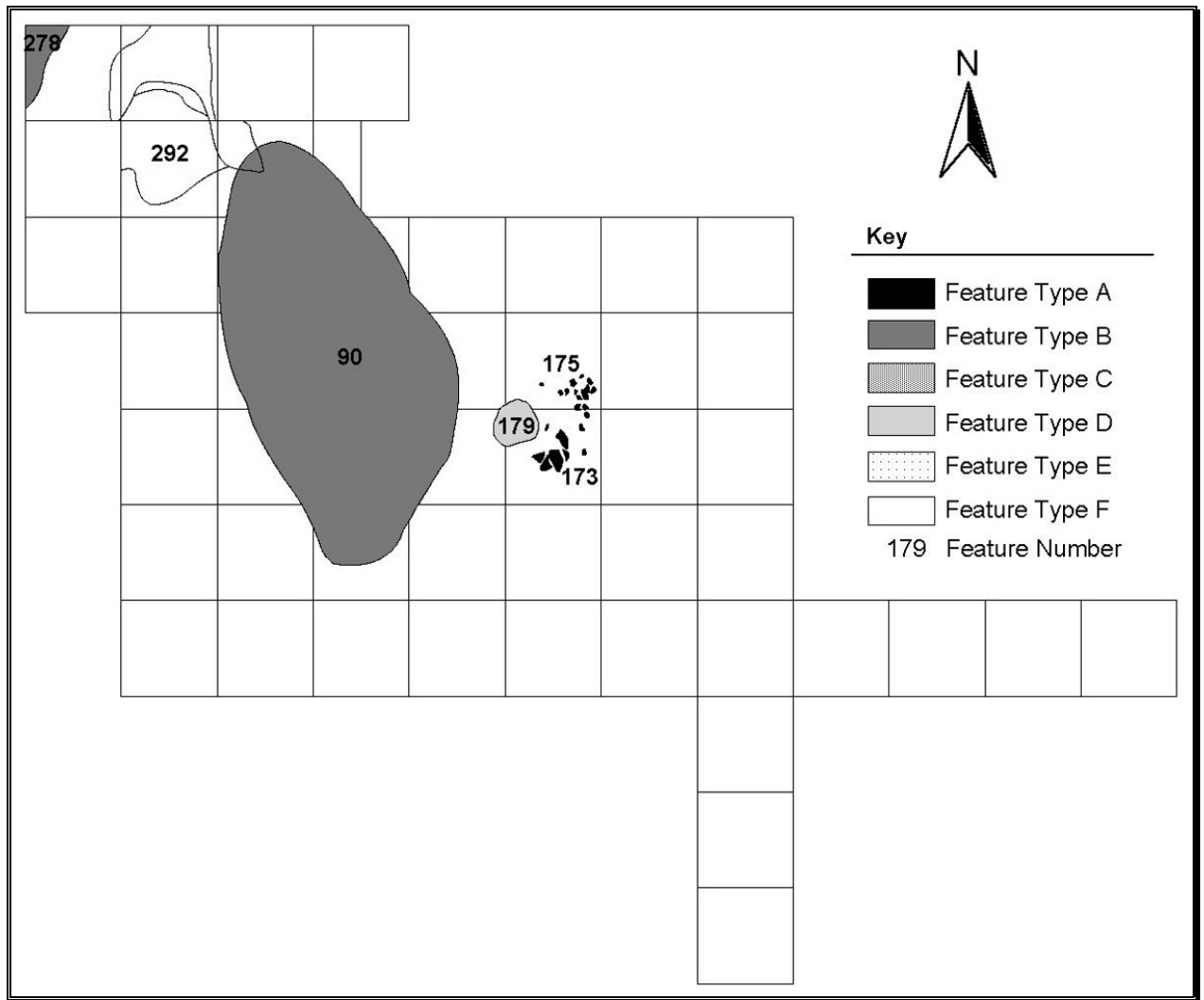


Figure 16.84 Locus I, Feature Locations

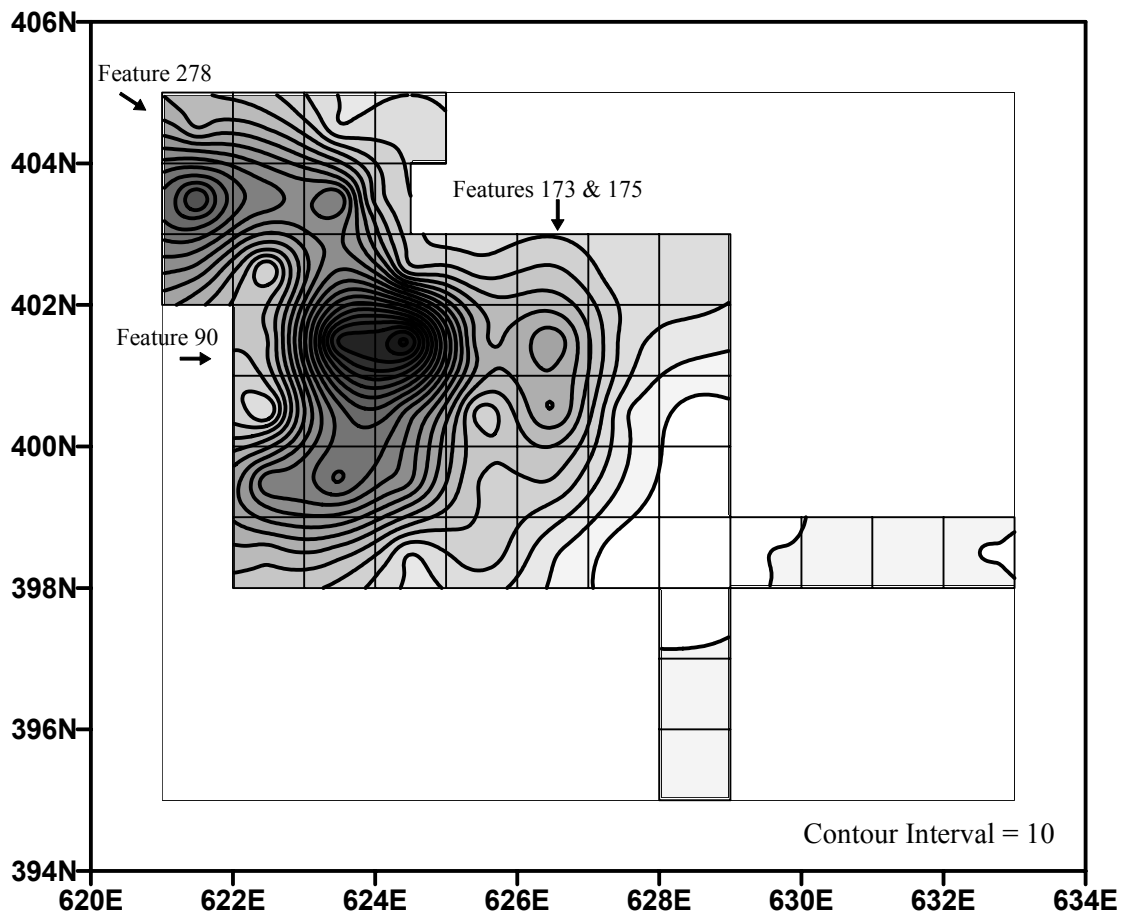


Figure 16.85 Locus I, Distribution of All Prehistoric Artifacts

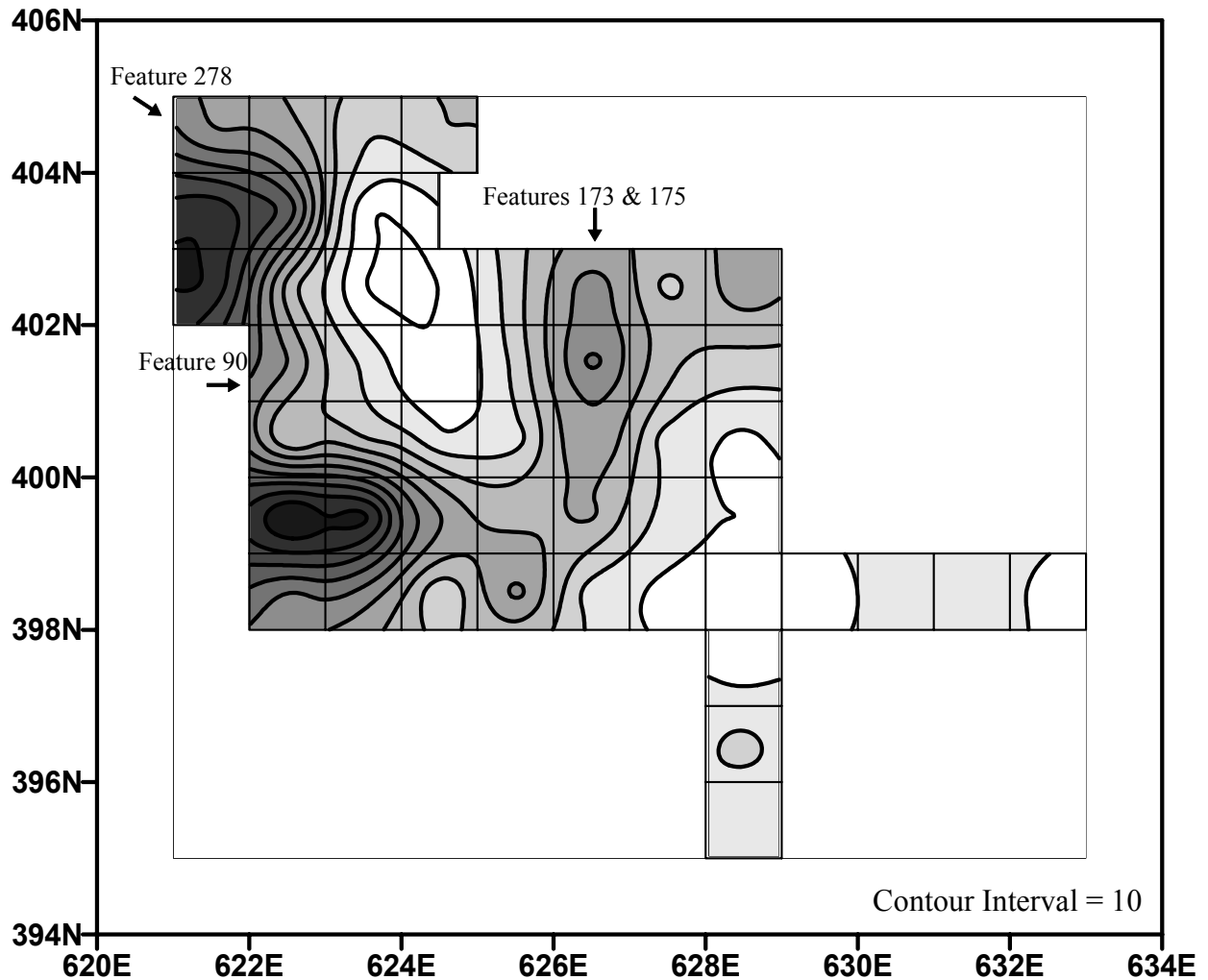


Figure 16.86 Locus I, Distribution of Artifacts within the E-horizon

The plot of artifacts within the E-horizon identified several clusters. To assess the clusters, different artifact types were plotted for the E-horizon. The artifact plots for the E-horizon suggested that the two dense clusters to the northwest and southwest were composed primarily of lithic debitage; this was more pronounced for the latter cluster. The distribution of TAS within the E-horizon provided interesting results as well (Figure 16.87). The cluster in the northwest corner was still visible, which suggested that it was composed of a mixture of both debitage and TAS. The cluster in the southwest corner was now less apparent and suggested that it was primarily comprised of lithic debitage. The other cluster noted in the E-horizon, near the location of TAS Features 173 and 175, was now evident in this distribution. This cluster therefore was composed primarily of TAS, even when disregarding the artifacts that comprised the evident stone features in the block. This result suggested that the features had been partially dispersed and that artifacts likely associated with those features had been moved from the delineated spatial boundary. Although the counts were low, the ceramic plots within the E-horizon may be valuable. A less intense cluster was located in the same position as the TAS clusters noted near Features 173 and 175 and may provide a relative date for those features and

the other artifacts located within those clusters. The densest ceramic cluster was located on the western edge of the block and was not associated with any of the previously identified clusters within the E-horizon.

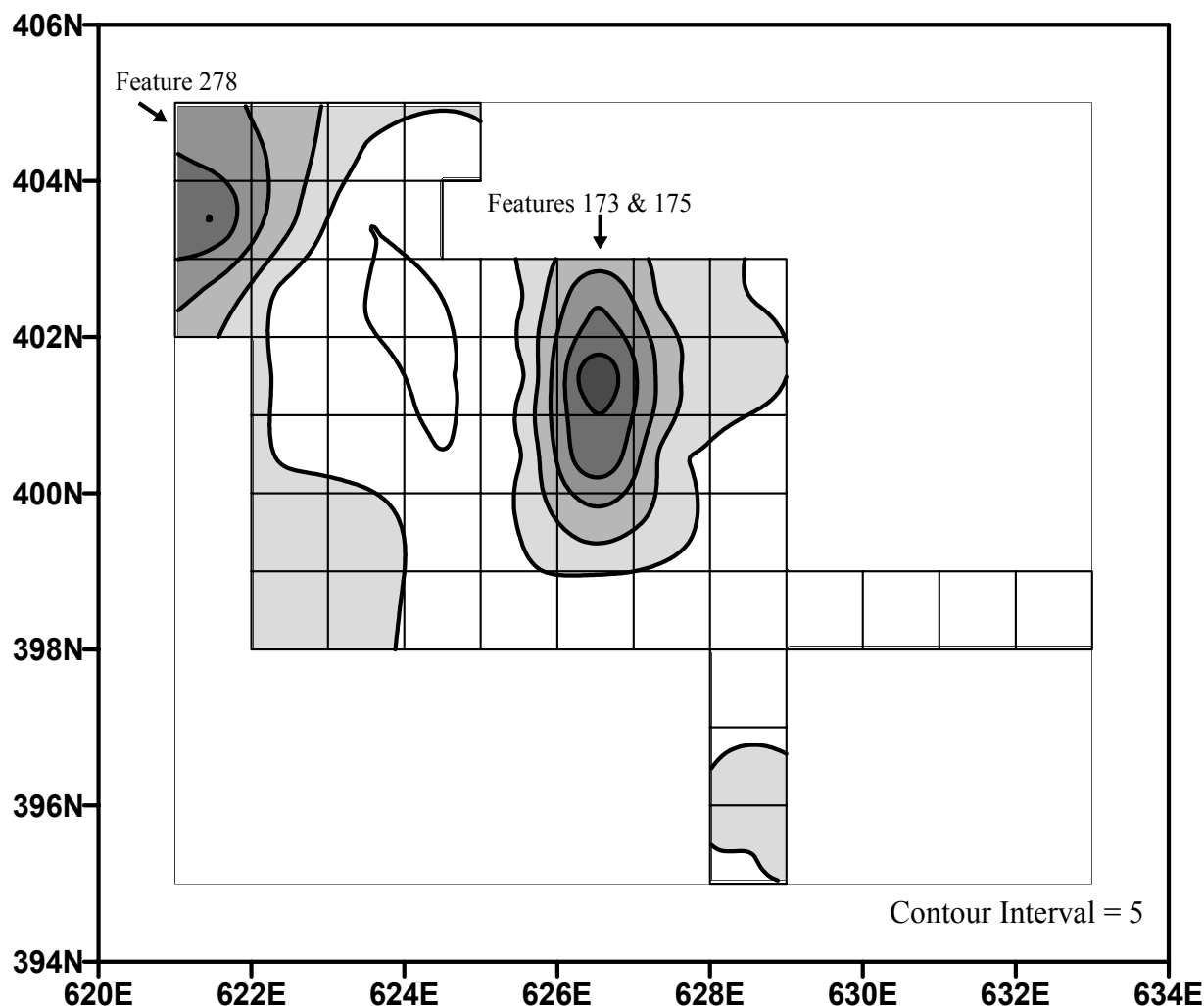


Figure 16.87 Locus I, Distribution of TAS within the E-horizon

Lithic Distribution

Further investigation of the clusters identified in the plot of artifacts recovered from the E-horizon revealed several more discrete spatial patterns. Lithic debitage was sorted by material type and then plotted. The distribution of jasper debitage (Figure 16.88) resulted in two dense and discrete clusters, and one less dense and diffuse cluster. The two dense clusters were located in the same position as the clusters revealed in the distribution of all E-horizon artifacts; the densest in the northwest corner and the second in the southwest corner. Their location suggested that they comprised a significant portion of these original clusters. The first cluster was located in the northwest corner of the block adjacent to a cluster of TAS in the E-horizon identified from computer plotting. Despite their partial overlap, the relative spatial integrity of these clusters

was suggestive of differential space use by activity. The cluster in the southwest corner was also relatively discrete from other clusters of artifact types, again supporting activity segregation.

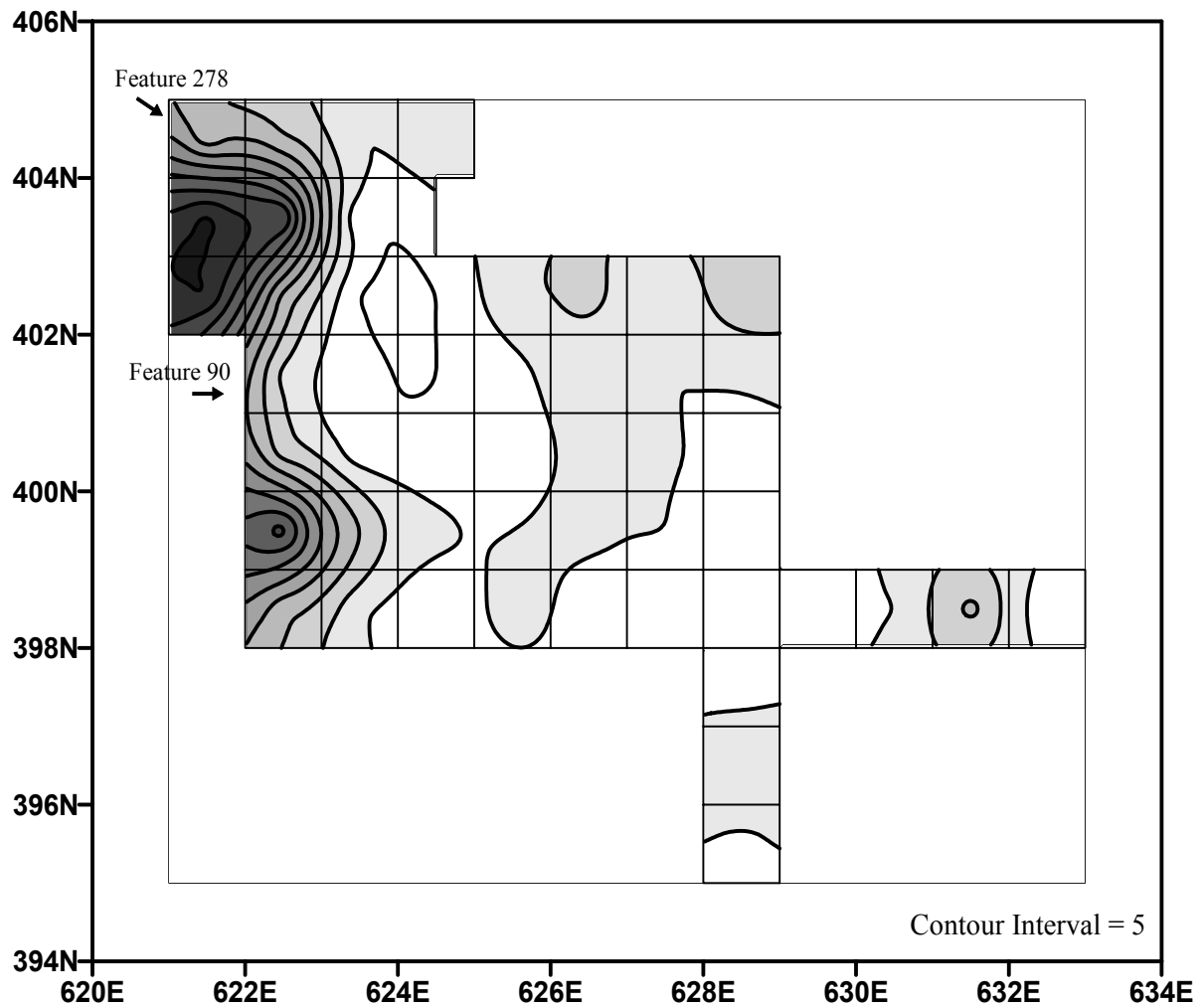


Figure 16.88 Locus I, Distribution of Jasper Debitage within the E-horizon

To further refine their content, these clusters were then summarized by size grade (Table 16.13 and Table 16.14). In addition, they were examined in relation to associated flaked tool artifacts of the same material type for possible chronological or activity association for the clusters.

The results of the size grade breakdowns for the two clusters revealed that both consisted primarily of debitage in the 2 cm or less size grades, especially Cluster 2 at 92 percent. Such a high majority of small debitage for the cluster suggested that the area was likely an area of tool maintenance or finishing and not of primary reduction. The presence of a small percentage of debitage in size grade 3 (6 percent) in Cluster 1 may suggest a more diverse range of reduction activities.

**Table 16.13 Size Grade Breakdown of the Northwest Jasper Cluster
in Units N403-405 E622-23**

Size Grade	Total Count	Percent
1	23	12
2	132	69
3	25	13
4	10	5
5	0	0
6	1	1
TOTAL	191	100

**Table 16.14 Size Grade Breakdown of the Southwest Jasper Cluster
in Units N399-401 E623 and N400 E624**

Size grade	Total Count	Percent
1	16	19
2	62	73
3	4	5
4	1	1
5	2	2
TOTAL	85	100

The location of jasper tools in the block also revealed interesting patterns (Figure 16.89). The first cluster contained an early-stage biface, an untyped point, and an Adena point within its spatial boundaries. In addition, a quartzite hammerstone was located at the northern limits of the cluster. The southwest cluster had a late-stage biface adjacent to its north edge, but no other tools in close proximity. The presence of tools in various stages of completion in spatial association with the jasper clusters, along with the breakdown of size grades for the debitage, all suggested that the final stages of finishing and/or tool maintenance were being conducted in this location for this material type.

The jasper projectile points recovered in Locus I did not provide a clear chronological association for the clusters. The points recovered were of types that generally spanned the Early to Middle Woodland periods, including two Woodland I and three Rossville points (Table 16.15). The Early and Middle Woodland periods were further represented by one point each: an Adena and a Jack's Reef point, respectively. A single jasper point from the Early to Middle Archaic was recovered from the block in the form of a LeCroy point. The Adena point was found among the northwest debitage cluster. The large ephemeral scatter along the west of the block contained a range of points from the Early to Middle Woodland periods: Woodland I, Rossville, and Jack's Reef. The remaining points were not found in association with the lithic clusters. The predominance of points from the Early to Middle Woodland periods was consistent with the site in general.

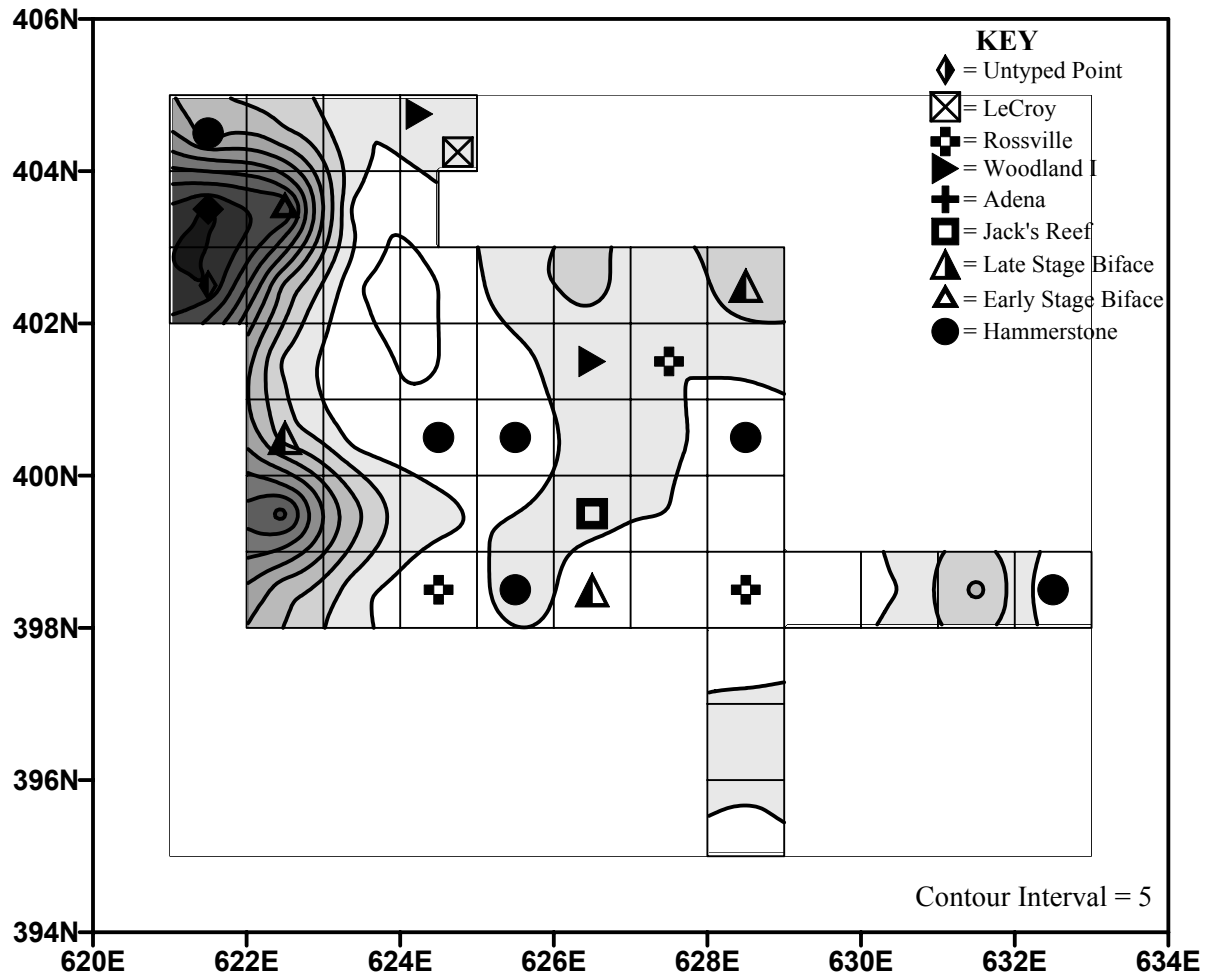


Figure 16.89 Locus I, Distribution of Jasper Debitage in the E-horizon with All Jasper Tools and All Hammerstones

Table 16.15 Summary of Jasper Projectile Points from the E-horizon in Locus I

Catalog number	Typology	Chronology
1087-1	Rossville	Early-Middle Woodland
1110-1	Rossville	Early-Middle Woodland
3138-1	Jack's Reef	Middle Woodland
3165-1	Woodland I	Early-Middle Woodland
3170-1	Rossville	Early-Middle Woodland
3195-1	Adena	Early Woodland
3229-1	Woodland I	Early-Middle Woodland
3231-1	LeCroy	Early-Middle Archaic

Additional examination of the artifact cluster located in the southwest corner of Locus I, revealed another debitage cluster of a specific material. Although the counts for this cluster were lower than those observed for the jasper cluster, the results were significant, as the material type

identified was ironstone, which was not commonly found across the site. The distribution of ironstone debitage recovered from the E-horizon (Figure 16.90) illustrated a discrete cluster in the southwest corner of the block, adjacent to the location of the second jasper cluster and south of Feature 90.

Plotting the location of ironstone flaked-stone tools did not produce clear associations. A single early-stage biface and a Poplar Island projectile point (3230-1) were recovered from units several meters north of the cluster. However, since the material type was uncommon, making an association between the cluster and the stone tools was considered valid. Three hammerstones were also located either within or just adjacent to the cluster and may represent tools used in the reduction of this material.

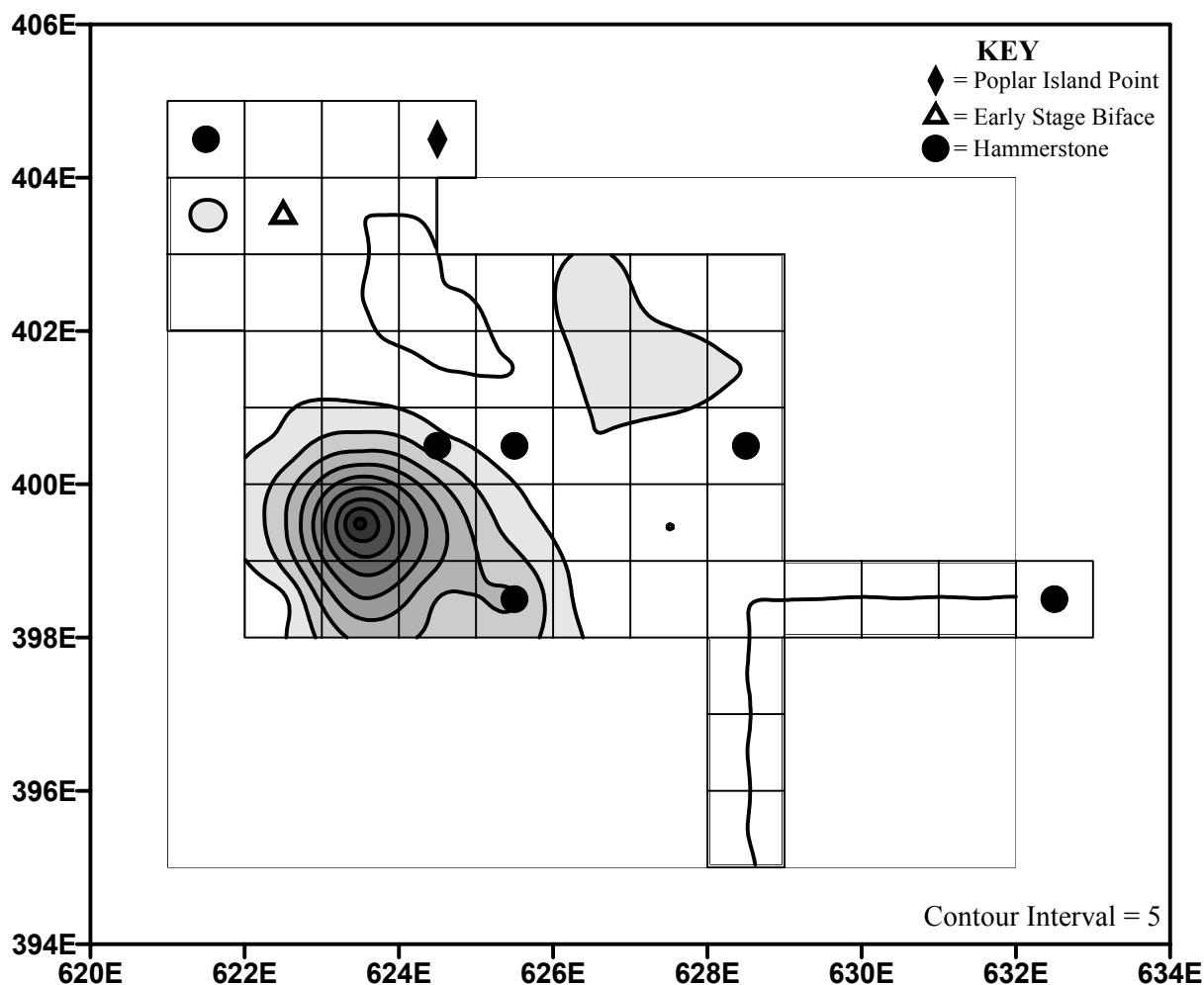


Figure 16.90 Locus I, Distribution of Ironstone Debitage within the E-horizon with Ironstone Tools and All Hammerstones

In an effort to further assess the ironstone debitage cluster within the E-horizon, the distribution of all ironstone artifacts from Locus I was plotted (Figure 16.91). The plot illustrated that the cluster of ironstone debitage was much more extensive than it appeared when only the E-horizon was considered. In total, Locus I contained 524 ironstone artifacts, of which

99 percent (520) were flakes. This total represented 78.4 percent of all ironstone artifacts recovered from the entire site. The plot also revealed that the cluster occurred over a greater horizontal area of the block, including several units that incorporated Feature 90. A breakdown of ironstone artifacts by their universal stratigraphy showed that the E-horizon yielded the greatest frequency (48 percent), followed by Feature 90 (42 percent), and the Ao-horizon (10 percent) (Table 16.16). Less than 1 percent of the artifacts were recovered from Features 179 and 278. The high frequency of ironstone artifacts recovered from within the feature boundaries was interesting and may suggest an association between these artifacts and the large basin.

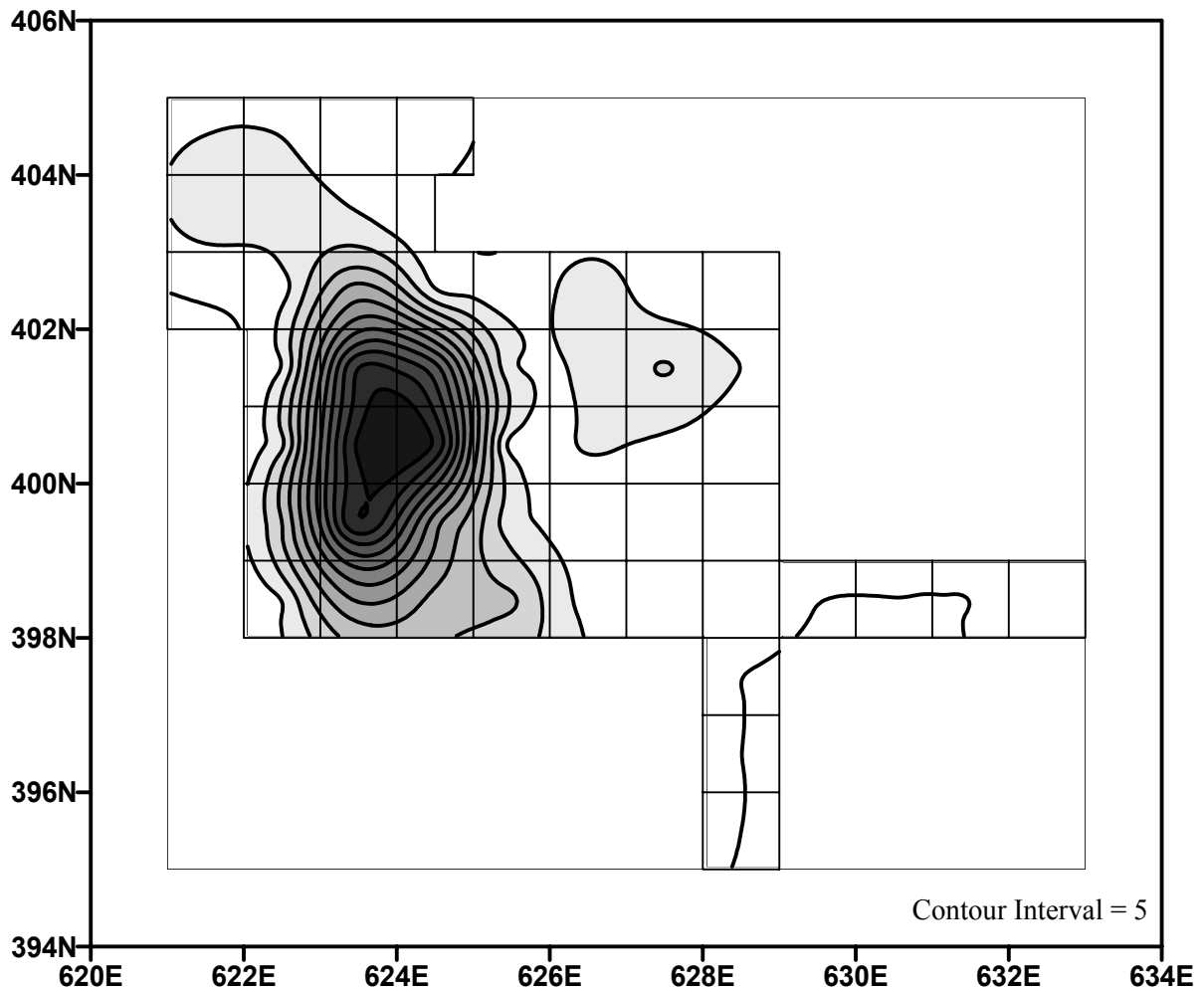


Figure 16.91 Locus I, Distribution of All Ironstone Artifacts

Table 16.16 Summary of Ironstone Artifacts by Universal Stratum

Universal stratum	Total Count	Percent
Ao	54	10
E	249	48
F-90	218	42
F-179	1	<1
F-278	2	<1

Size grade analysis of the ironstone debitage demonstrated that 91 percent of the flakes were within the first two size grades, less than 2 cm (Table 16.17). Nine percent were within the third size grade 2>x>3 cm, while less than 1 percent was of size grade 4. This result suggested that the flakes were primarily from finishing or tool maintenance activities and not primary reduction.

Table 16.17 Size Grade Breakdown of Ironstone Debitage in Locus I

Size grade	Total Count	Percent
1	108	21
2	366	70
3	46	9
4	1	<1
TOTAL	521	100

One final artifact material type, a green colored argillite, was investigated in Locus I. In the early stages of cataloging, this specific material was noted and tended to be associated with ironstone debitage. Given the size of the ironstone cluster evident in Locus I, a distribution was also plotted for the green colored argillite (Figure 16.92). Although not as extensive as the jasper or ironstone debitage clusters, the distribution of the green argillite resulted in one dense cluster in the northern portion of the block and a smaller, less dense cluster at the southern end. The southern cluster of argillite corresponded with the location of ironstone artifacts and was found northeast of the second jasper cluster. The northern argillite cluster was adjacent to the east side of the first jasper cluster and north of the ironstone stone cluster.

The cluster comprised 169 artifacts, all of which were flakes; no chipped stone tools of this material were found in the block. This was the only lithic cluster identified that had no associated tools of the same material in spatial proximity. Size grade breakdown of the material also suggested that the cluster represented finishing or tool maintenance debris, as 88 percent of the flakes were of size grades less than 2 cm (Table 16.18).

Ceramic Distribution

The plot of all ceramics in Locus I produced only one large discrete cluster (Figure 16.93). This cluster was located just west of the center of the block and centered over the location of Feature 90. The remainder of the block displayed a relatively even distribution of ceramics. However, the southern wing and part of the eastern wing contained few to no ceramics in relation to the rest of the block. The results of the plot of ceramics mirrored the total artifact distribution for the block in many respects. Ceramics, like total artifacts, were found with greatest frequency around the location of Feature 90. Both also displayed low counts in the center, south, and eastern parts of the wings of the block. The main difference between the total artifact distribution and the total ceramic distribution occurred in the northwest corner of the block. This was the location of substantial lithic debitage clusters, which created a cluster in total artifact distribution. The northwest corner of the block for ceramics, however, lacked such a cluster.

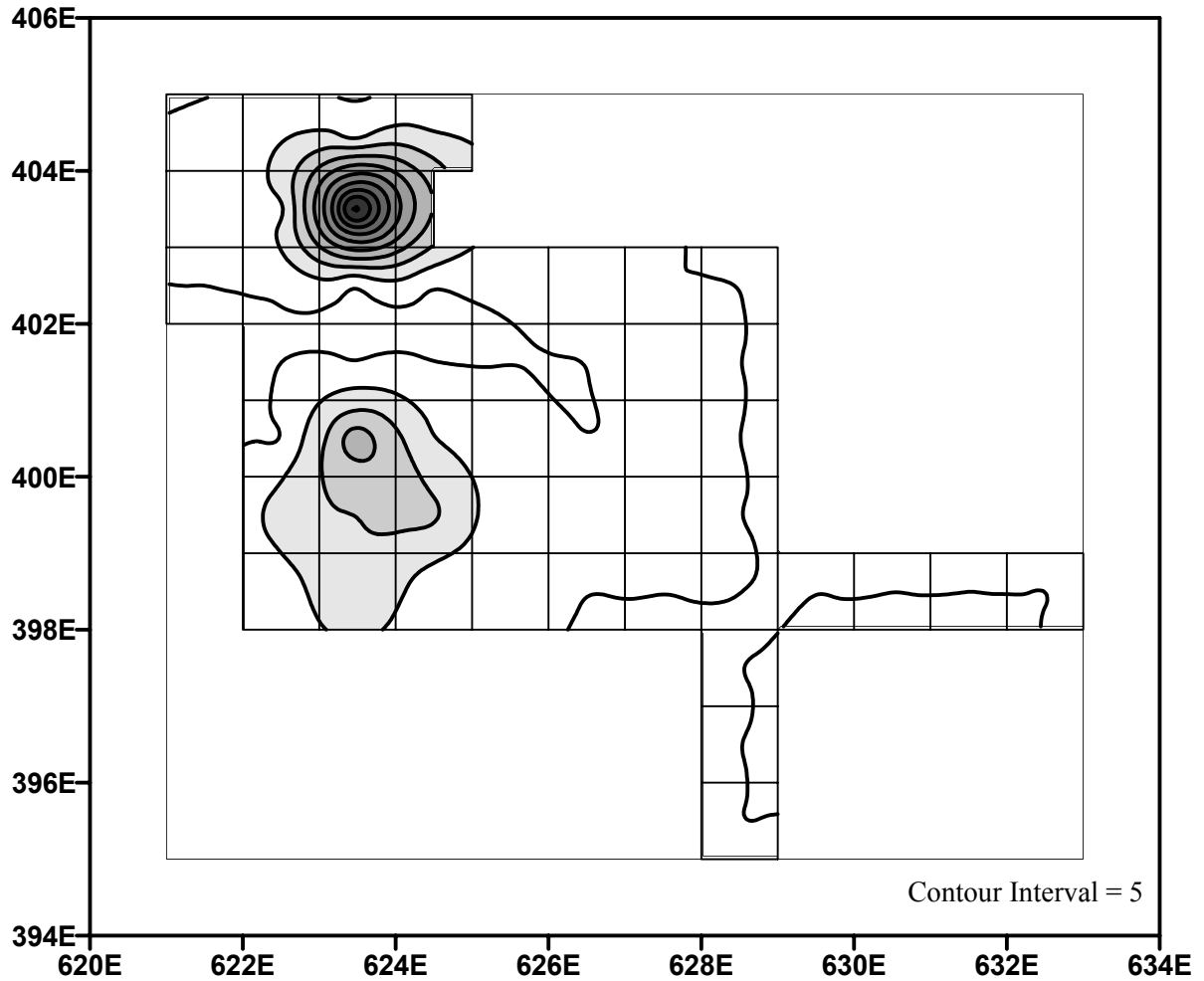


Figure 16.92 Locus I, Distribution of All Green Argillite Artifacts

Table 16.18 Size Grade Breakdown of Green Argillite Debitage in Locus I

Size grade	Total count	Percent
1	40	24
2	109	64
3	13	8
4	5	3
5	1	1
6	1	1
TOTAL	169	100

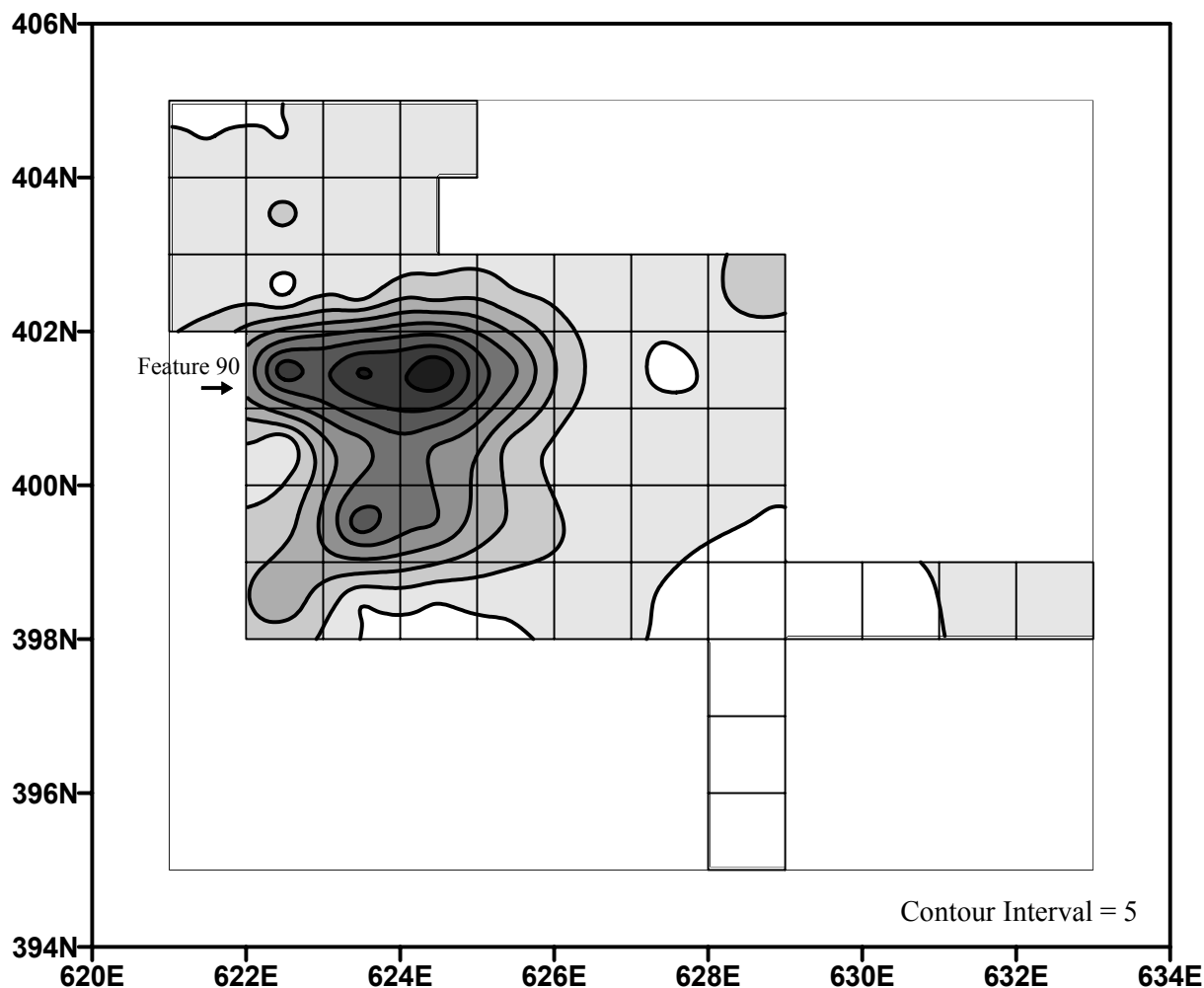


Figure 16.93 Locus I, Distribution of All Ceramics

The general clustering of all ceramics in the same area of Locus I likely represents an important spatial pattern in its own right, but makes it difficult to isolate specific ceramic types and their potential associations. Untyped ceramics accounted for the greatest number of sherds recovered in Locus I. Clay Tempered ceramics were the most frequent type recovered, with more than four times the amount of any other typed ceramic. Marcey Creek was the only other type well-represented in Locus I, but had lower total numbers in relation to the rest of the Northwest Main Block.

Locus I contained a relatively small minority of Marcey Creek ceramics, when compared to Clay Tempered and untyped ceramics in the block. However, when the contour interval was adjusted to reflect the smaller overall numbers, the distribution of Marcey Creek ceramics showed a degree of spatial clustering (Figure 16.94). The densest part of the cluster was located in the north-central part of the block and along the edges of Feature 90. A less dense, secondary cluster was located 2 m south of the dense cluster, also in the vicinity of Feature 90. The relatively tight clustering of the Marcey Creek ceramics in this area, however, is not entirely unexpected given the general clustering of all ceramics in and around Feature 90. It is an important pattern to note as it illustrated that horizontal integrity could be maintained across the

block, despite the presence of the large basin feature. The clustering of the Marcey Creek ceramics in such a relatively discrete location suggested that the cluster maintained some spatial integrity.

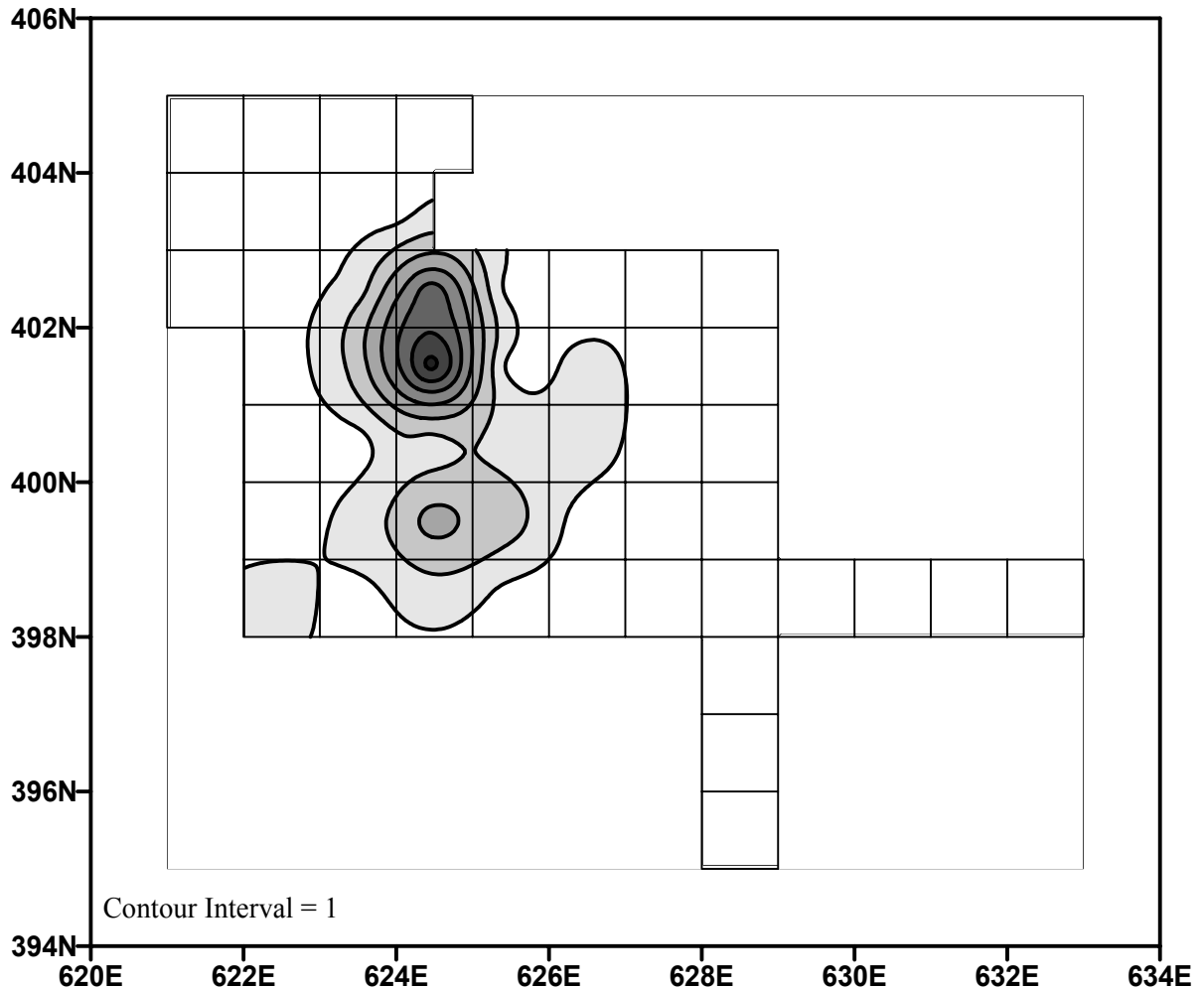


Figure 16.94 Locus I, Distribution of All Marcey Creek Ceramics

Clay Tempered ceramics accounted for the majority of typed ceramics recovered from Locus I. Their distribution in the block, therefore, was similar to the patterns observed from the plot of all ceramics in the block. The greatest concentration of Clay Tempered ceramics was found along the southwest edges of the block and adjacent to Feature 90 (Figure 16.95). There were two dense concentrations that maintained some separation from each other: one in the southwest corner and the other 2 m north along the west edge of the block. In this respect, the main clusters of Clay Tempered ceramics evidenced a bit of horizontal separation from the Marcey Creek ceramics. However, they were found in greater numbers so that even the areas with relatively lower frequencies of Clay Tempered ceramics still contained more sherds than those of Marcey Creek ceramics. As with total ceramics, Clay Tempered ceramics were infrequent in the south and east wings and the northwest corner of the block. Outside of those areas, a relatively even distribution of Clay Tempered ceramics was observed. The higher

numbers of Clay Tempered ceramics found in Locus I suggested more intense use of this area. The relatively uniform spread of those ceramics with some discrete clusters also suggested a more intense use and fair degree of horizontal spatial integrity for this ceramic type.

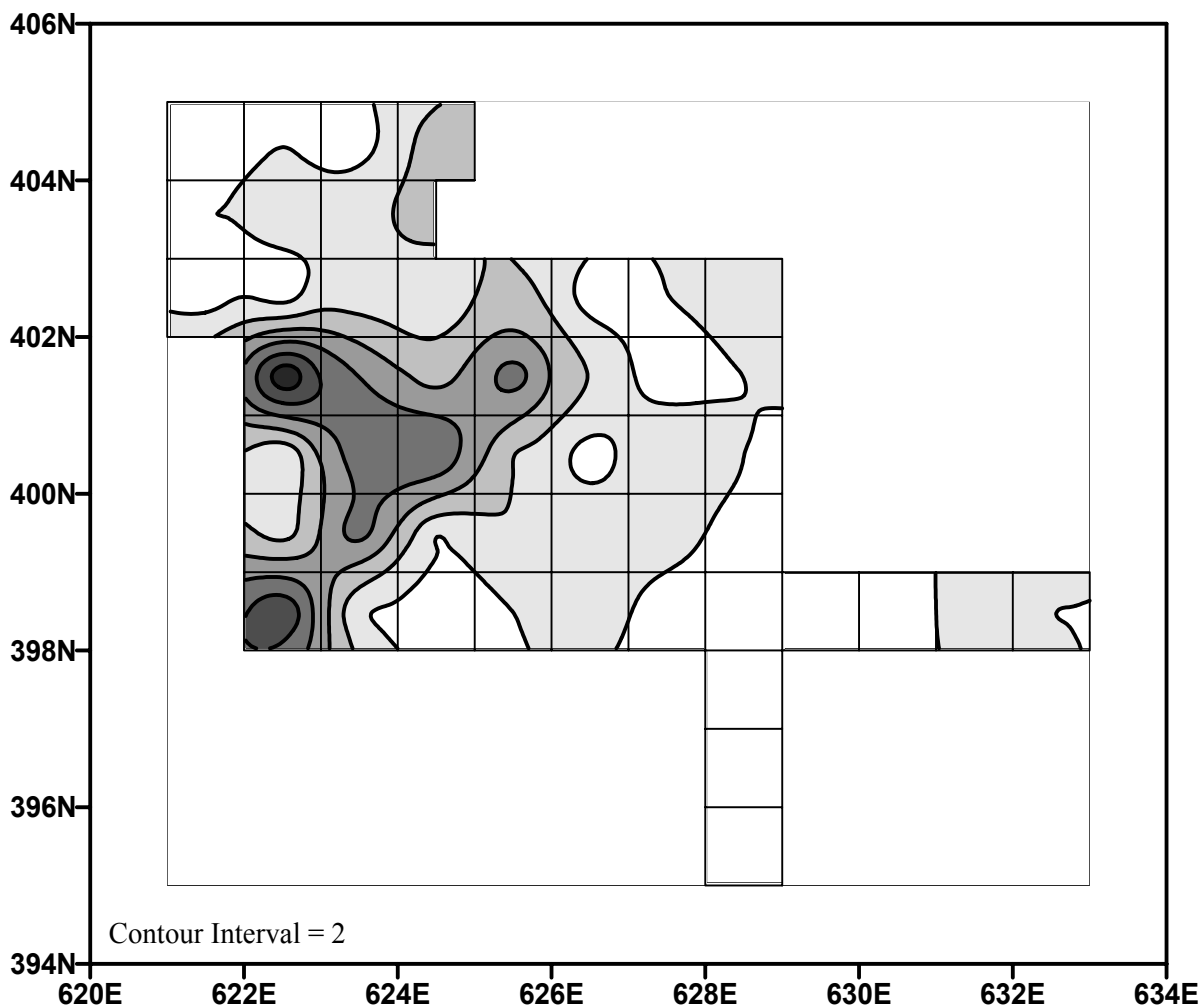


Figure 16.95 Locus I, Distribution of All Clay Tempered Ceramics

Vessel Lot MA08 consisted of 12 artifacts and was found mostly within Locus I. However, two sherds from this lot were found elsewhere in the Northwest Quadrant: one sherd, in Locus H Block 2 and the other in an unincorporated test excavation (Figure 16.96). The separation between the main cluster of sherds and the sherd to the south was approximately 24 m, which represented a substantial displacement. Within Locus I, the locations of sherds from Vessel Lot MA08 were consistent with the plot of all Marcey Creek ceramics in the block and coincided with both the main cluster to the north of the block and the secondary cluster 2 m south. Vessel Lot MA08 was recovered from two sets of four contiguous units in Locus I. A single refit group was identified between two contiguous units in the southern cluster of Locus I. The relatively discrete locations and close patterning of sherds from Vessel Lot MA08 within

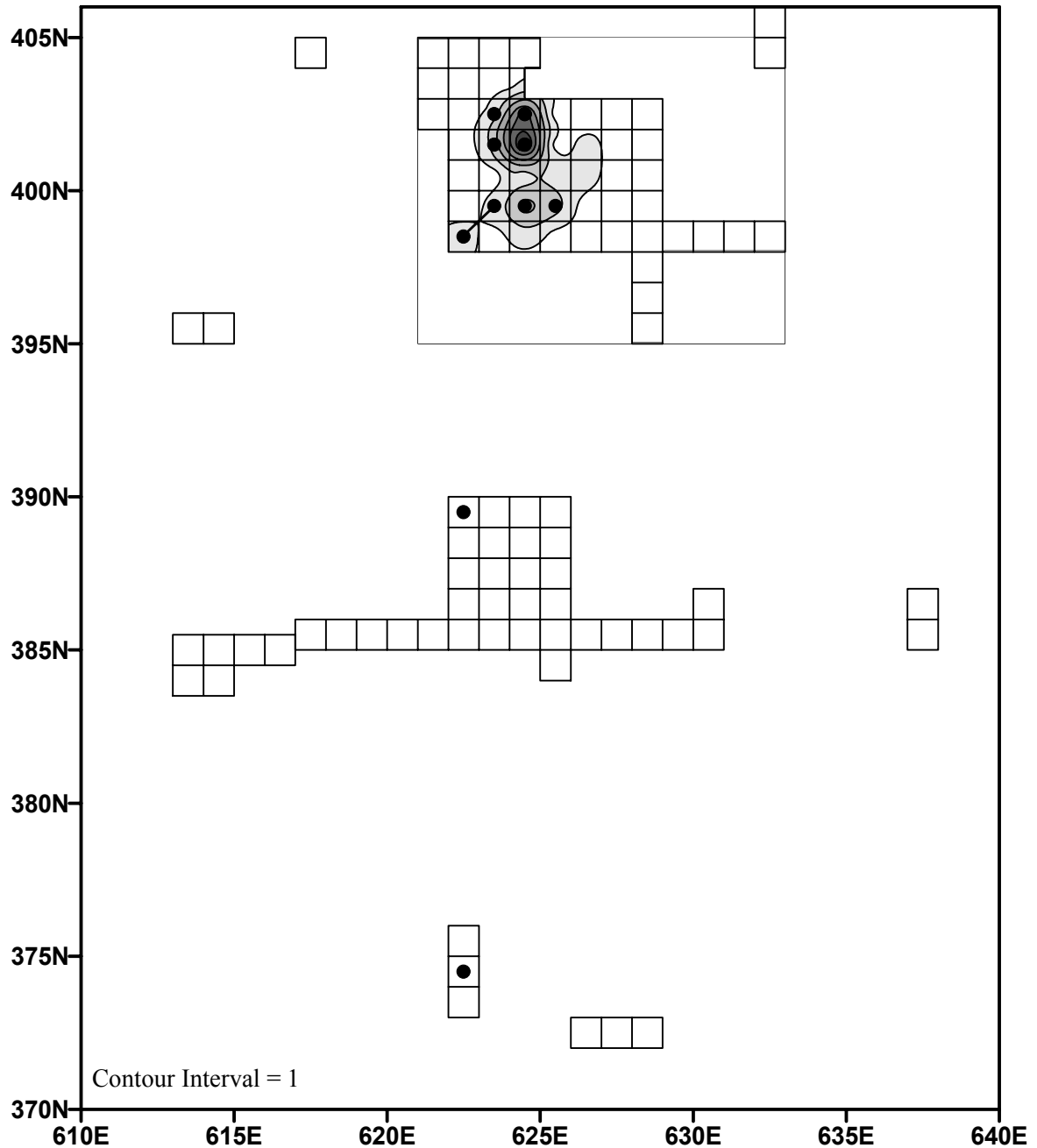


Figure 16.96 Locus I, Locus H Block 2 and Outlying Areas, Location of Vessel Lot MA08, Overlaid on Distribution of All Marcey Creek Ceramics

Locus I suggested that it maintained some level of spatial integrity. The two additional sherds found south of the main cluster, however, mitigated this interpretation somewhat by suggesting a wide dispersion of the vessel. In terms of stratigraphy, Vessel Lot MA08 was recovered from the Ao- and E-horizons as well as basin Feature 90 and TAS Feature 163.

Vessel Lot CN05 consisted of 11 sherds. Of these, nine were recovered from Locus I. The others were found in other portions of the Northwest Quadrant: one in Locus G in the main block and the other in an unincorporated test excavation (Figure 16.97). The horizontal separation between the main cluster of the lot and the furthest sherd was more than 30 m and represented a substantial dispersion of the vessel. In addition, no direct cross-mends were identified for the sherds comprising the lot. Within Locus I, however, Vessel Lot CN05 was found in a fairly tight cluster of seven contiguous units. The locations of these sherds also matched the clusters of Clay Tempered ceramics identified in the plot of this type for Locus I. Sherds of Vessel Lot CN05 were recovered from each of the dense clusters and also from the secondary clusters of Clay Tempered ceramics in the block. The location of the sherd found in Locus G was also part of a dense cluster of Clay Tempered ceramics identified in that block. The identification of this specific vessel lot in these separate locations helped to establish connections between the blocks. In terms of stratigraphy, seven of eleven sherds of Vessel Lot CN05 were recovered from E-horizon contexts. Three more were found in Feature 90. The remaining sherd was found in the Ao-horizon, and was the sherd recovered furthest away from the rest of the lot. The clustering noted for the lot within Locus I suggested a high degree of spatial integrity. However, the two outlying sherds of this lot implied less integrity. The dispersion of this lot over such a wide area could represent a number of things, such as continued use of the vessel after its initial breakage, which would result in pieces being found in different locations or removal for reuse for a different function, such as temper for a new vessel. The wide dispersal of the lot could also be the result of site cleaning, whereby the pieces were removed from their original locations.

Summary

Locus I revealed several important spatial patterns. Generally, artifact counts for all types were highest in the block in and around Feature 90, a large basin feature. A significant area of lower artifact frequency was identified in the eastern portion of the block away from Feature 90, which suggested more focused use of the area. When artifacts were plotted for just the E-horizon, two large and discrete clusters were identified. Further investigation of these clusters identified a small concentration of TAS not associated with evident features and a cluster of TAS associated with two evident stone features. Lithic distributions produced several discrete concentrations by material types that included two jasper clusters, an ironstone cluster, and a green argillite cluster. These latter two material types occurred with low frequency at the site and suggested a high level of integrity for their clustering in Locus I. Ceramic plots revealed some spatial patterning. Although the counts for ceramics types were low, a small degree of horizontal separation between Clay Tempered and Marcey Creek ceramics was evident. This was not as clear as patterns produced in other blocks, but still implied some level of discreteness in differing occupations.

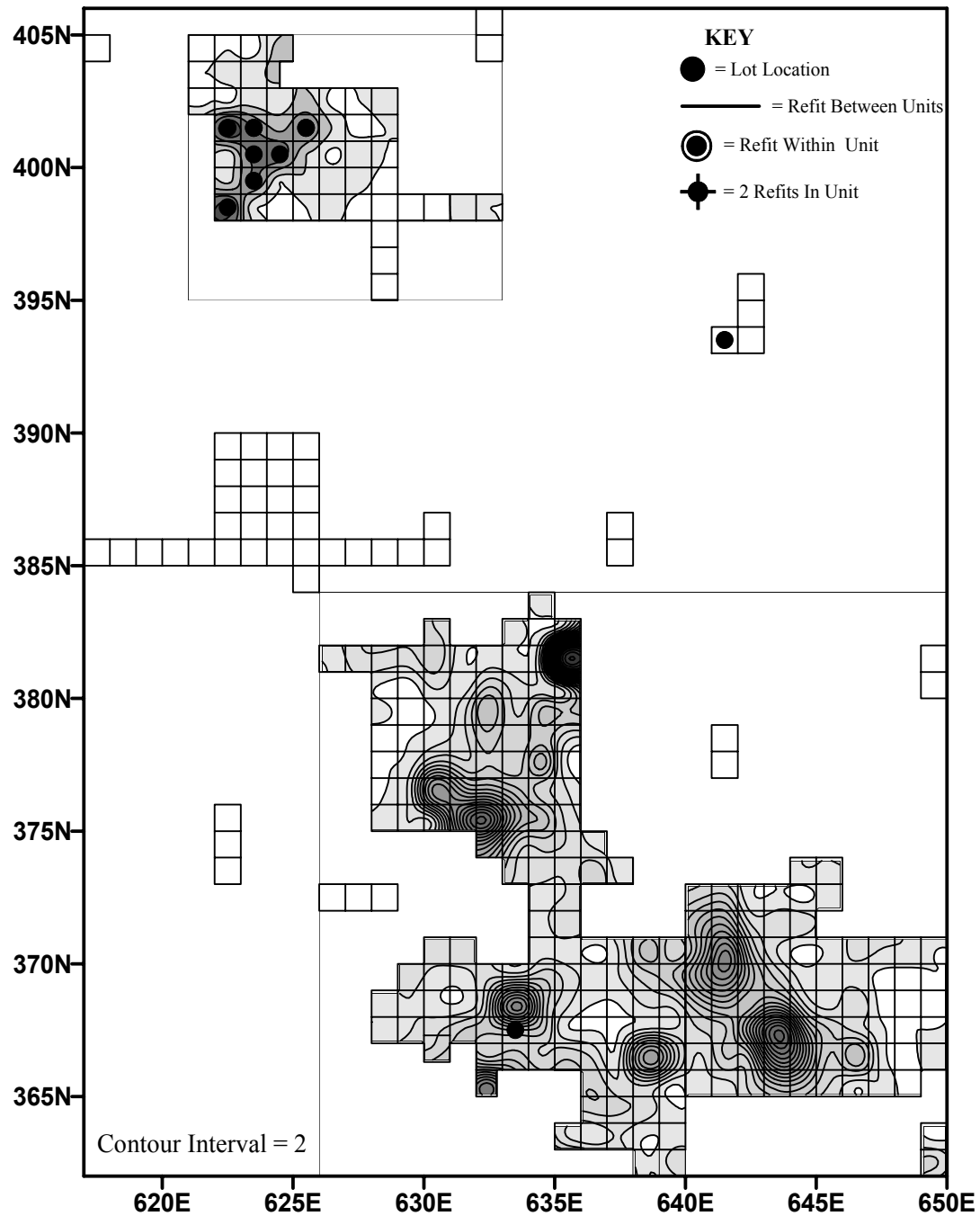


Figure 16.97 Locus I and Northwest Main Block, Location of Vessel Lot CN05, Overlaid on Distribution of All Clay Tempered Ceramics